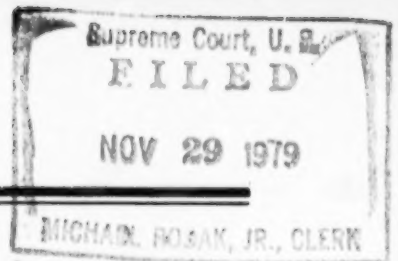


No. 65, Original



IN THE
Supreme Court of the United States

October Term, 1975

STATE OF TEXAS, *Plaintiff*

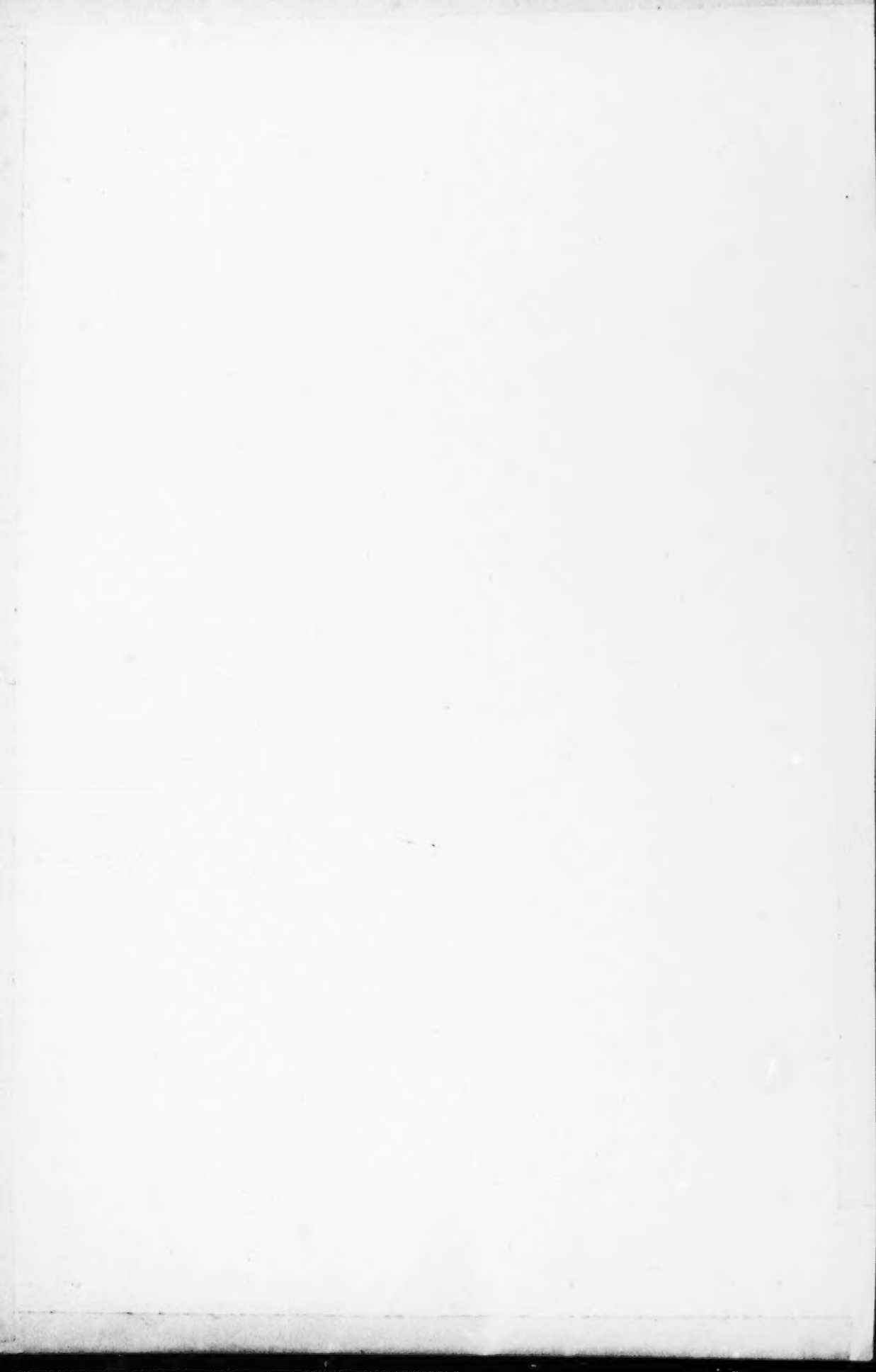
v.

STATE OF NEW MEXICO, *Defendant*
UNITED STATES OF AMERICA, *Intervenor*

**NEW MEXICO'S OBJECTIONS TO THE
REPORT OF THE SPECIAL MASTER
AND BRIEF IN SUPPORT THEREOF**

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November 29, 1979



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STATE OF TEXAS, *Plaintiff*

v.

STATE OF NEW MEXICO, *Defendant*
UNITED STATES OF AMERICA, *Intervenor*

**OBJECTIONS TO THE
REPORT OF THE SPECIAL MASTER**

Comes now the State of New Mexico to object to the report of the Special Master accepted for filing on October 15, 1979. New Mexico objects to:

1. The supposition that the "1947 condition" stage of development is that existing at the beginning of the year 1947 instead of that existing at the end of the year 1947;

2. The Master's "conclusion" no. 1, which he appears to have orally construed to mean that the 1947 condition stage of development does not include ground water uses developed before 1947, except to the extent that the effects of those uses had already been reflected in the flow of the Pecos River in 1947; and,

3. The Master's refusal to admit New Mexico's evidence on the negotiators' intent with respect to the meaning of the 1947 condition.

WHEREFORE, the State of New Mexico prays that the Court overrule the Special Master and remand the case with instructions to proceed with trial with the understanding that: 1) the 1947 condition is that situation in the Pecos River Basin which produced in New Mexico the man made depletions resulting from the stage of development existing in 1947 even though the effects of those depletions had not yet been fully reflected in the flow of the river, and 2) that the development that occurred during the year 1947 is part of that condition.

Respectfully submitted,

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**BRIEF IN SUPPORT
OF OBJECTIONS**

JURISDICTION

The original jurisdiction of the Court was invoked under Art. III, Section 2, Clause 2 of the Constitution of the United States and 28 U.S.C. § 1251(a) (1).

PECOS RIVER COMPACT

The grant of consent of Congress to the Pecos River Compact was given in the Act of June 9, 1949, ch. 184, 63 Stat. 159 (1949), and the compact is codified as § 72-15-19 N.M.S.A. 1978 and Tex. Water Code Ann. tit. 3, § 43.010 (Vernon 1972). For the convenience of the Court the compact is set out in full below, as printed in Stipulated Exhibit No. 1 (S. Doc. No. 109,

81st Cong., 1st Sess. (1948) which appears in the record as Stip. Ex. No. 1, hereinafter referred to as S.D. 109).

PECOS RIVER COMPACT

The State of New Mexico and the State of Texas, acting through their Commissioners, John H. Bliss for the State of New Mexico and Charles H. Miller for the State of Texas, after negotiations participated in by Berkeley Johnson, appointed by the President as the representative of the United States of America, have agreed respecting the uses, apportionment and deliveries of the water of the Pecos River as follows:

ARTICLE I

The major purposes of this Compact are to provide for the equitable division and apportionment of the use of the waters of the Pecos River; to promote interstate comity; to remove causes of present and future controversies; to make secure and protect present development within the states; to facilitate the construction of works for, (a) the salvage of water, (b) the more efficient use of water, and (c) the protection of life and property from floods.

ARTICLE II

As used in this Compact:

(a) The term "Pecos River" means the tributary of the Rio Grande which rises in north-central New Mexico and flows in a southerly direction through New Mexico and Texas and joins the Rio Grande near the town of Langtry, Texas, and includes all tributaries of said Pecos River.

(b) The term "Pecos River Basin" means all of the contributing drainage area of the Pecos River and its tributaries above its mouth near Langtry, Texas.

(c) "New Mexico" and "Texas" mean the State of New Mexico and the State of Texas, respectively; "United States" means the United States of America.

(d) The term "Commission" means the agency created by this compact for the administration thereof.

(e) The term "deplete by man's activities" means to diminish the stream flow of the Pecos River at any given point as a result of beneficial consumptive uses of water within the Pecos River Basin above such point. For the purposes of this compact it does not include the diminution of such flow by encroachment of salt cedars or other like growth, or by deterioration of the channel of the stream.

(f) The term "Report of the Engineering Advisory Committee" means that certain report of the Engineering Advisory Committee dated January 1948, and all appendices thereto; including, basic data, processes, and analyses utilized in preparing that report, all of which were reviewed, approved, and adopted by the Commissioners signing this Compact at a meeting held in Santa Fe, New Mexico, on December 3, 1948, and which are included in the Minutes of that meeting.

(g) The term "1947 condition" means that situation in the Pecos River Basin as described and defined in the Report of the Engineering Advisory Committee. In determining any question of fact hereafter arising as to such situation, reference shall be made to, and decisions shall be based on, such report.

(h) The term "water salvaged" means that quantity of water which may be recovered and made available for beneficial use and which quantity of water under the 1947 condition was non-beneficially consumed by natural processes.

(i) The term "unappropriated flood waters" means water originating in the Pecos River Basin above Red Bluff Dam in Texas, the impoundment of which will not deplete the water

usable by the storage and diversion facilities existing in either state under the 1947 condition and which if not impounded will flow past Girvin, Texas.

ARTICLE III

(a) Except as stated in paragraph (f) of this article, New Mexico shall not deplete by man's activities the flow of the Pecos River at the New Mexico-Texas state line below an amount which will give to Texas a quantity of water equivalent to that available to Texas under the 1947 condition.

(b) Except as to the unappropriated flood waters thereof, the apportionment of which is included in and provided for by paragraph (f) of this Article, the beneficial consumptive use of the waters of the Delaware River is hereby apportioned to Texas, and the quantity of such beneficial consumptive use shall be included in determining waters received under the provisions of paragraph (a) of this Article.

(c) The beneficial consumptive use of water salvaged in New Mexico through the construction and operation of a project or projects by the United States or by joint undertakings of Texas and New Mexico, is hereby apportioned forty-three per cent (43%) to Texas and fifty-seven per cent (57%) to New Mexico.

(d) Except as to water salvaged, apportioned in paragraph (c) of this Article, the beneficial consumptive use of water which shall be non-beneficially consumed, and which is recovered, is hereby apportioned to New Mexico but not to have the effect of diminishing the quantity of water available to Texas under the 1947 condition.

(e) Any water salvaged in Texas is hereby apportioned to Texas.

(f) Beneficial consumptive use of unappropriated flood waters is hereby apportioned fifty per cent (50%) to Texas and fifty per cent (50%) to New Mexico.

ARTICLE IV

(a) New Mexico and Texas shall cooperate to support legislation for the authorization and construction of projects to eliminate non-beneficial consumption of water.

(b) New Mexico and Texas shall cooperate with agencies of the United States to devise and effectuate means of alleviating the salinity conditions of the Pecos River.

(c) New Mexico and Texas each may:

- (i) Construct additional reservoir capacity to replace reservoir capacity made unusable by any cause.
- (ii) Construct additional reservoir capacity for utilization of water salvaged and unappropriated flood waters apportioned by this Compact to such state.
- (iii) Construct additional reservoir capacity for the purpose of making more efficient use of water apportioned by this Compact to such state.

(d) Neither New Mexico nor Texas will oppose the construction of any facilities permitted by this Compact, and New Mexico and Texas will cooperate to obtain the construction of facilities that will be of joint benefit to the two states.

(e) The Commission may determine the conditions under which Texas may store water in works constructed in and operated by New Mexico.

(f) No reservoir shall be constructed and operated in New Mexico above Avalon Dam for the sole benefit of Texas unless the Commission shall so determine.

(g) New Mexico and Texas each has the right to construct and operate works for the purpose of preventing flood damage.

(h) All facilities shall be operated in such manner as to carry out the terms of this Compact.

ARTICLE V

(a) There is hereby created an interstate administrative agency to be known as the "Pecos River Commission." The Commission shall be composed of one Commissioner representing each of the states of New Mexico and Texas, designated or appointed in accordance with the laws of each such state, and, if designated by the President, one Commissioner representing the United States. The President is hereby requested to designate such a Commissioner. If so designated, the Commissioner representing the United States shall be the presiding officer of the Commission, but shall not have the right to vote in any of the deliberations of the Commission. All members of the Commission must be present to constitute a quorum.

(b) The salaries and personal expenses of each Commissioner shall be paid by the government which he represents. All other expenses which are incurred by the Commission incident to the administration of this Compact and which are not paid by the United States shall be borne equally by the two states. On or before November 1 of each even numbered year the Commission shall adopt and transmit to the Governors of the two states and to the President a budget covering an estimate of its expenses for the following two years. The payment of the expenses of the Commission and of its employees shall not be subject to the audit and accounting procedures of either of the two states. However, all receipts and disbursements of funds handled by the Commission shall be audited yearly by a qualified independent public accountant and the report of the audit shall be included in, and become a part of, the annual report of the Commission.

(c) The Commission may appoint a secretary who, while so

acting, shall not be an employee of either state. He shall serve for such terms, receive such salary, and perform such duties as the Commission may direct. The Commission may employ such engineering, legal, clerical, and other personnel as in its judgment may be necessary for the performance of its functions under this Compact. In the hiring of employees the Commission shall not be bound by the civil service laws of either state.

(d) The Commission, so far as consistent with this Compact, shall have power to:

1. Adopt rules and regulations;
2. Locate, establish, construct, operate, maintain, and abandon water gaging stations, independently or in cooperation with appropriate governmental agencies;
3. Engage in studies of water supplies of the Pecos River and its tributaries, independently or in cooperation with appropriate governmental agencies;
4. Collect, analyze, correlate, preserve and report on data as to the stream flows, storage, diversions, salvage, and use of the waters of the Pecos River and its tributaries, independently or in cooperation with appropriate governmental agencies;
5. Make findings as to any change in depletion by man's activities in New Mexico, and on the Delaware River in Texas;
6. Make findings as to the deliveries of water at the New Mexico-Texas state line;
7. Make findings as to the quantities of water salvaged and the amount thereof delivered at the New Mexico-Texas state line;
8. Make findings as to quantities of water non-beneficially consumed in New Mexico;

9. Make findings as to quantities of unappropriated flood waters;
10. Make findings as to the quantities of reservoir losses from reservoirs constructed in New Mexico which may be used for the benefit of both states, and as to the share thereof charged under Article VI hereof to each of the states;
11. Acquire and hold such personal and real property as may be necessary for the performance of its duties hereunder and to dispose of the same when no longer required;
12. Perform all functions required of it by this Compact and do all things necessary, proper or convenient in the performance of its duties hereunder, independently or in cooperation with appropriate governmental agencies;
13. Make and transmit annually to the Governors of the signatory states and to the President of the United States on or before the last day of February of each year, a report covering the activities of the Commission for the preceding year.

(e) The Commission shall make available to the Governor of each of the signatory states any information within its possession at any time, and shall always provide free access to its records by the Governors of each of the States, or their representatives, or authorized representatives of the United States.

(f) Findings of fact made by the Commission shall not be conclusive in any court, or before any agency or tribunal, but shall constitute prima facie evidence of the facts found.

(g) The organization meeting of the Commission shall be held within four months from the effective date of this Compact.

ARTICLE VI

The following principles shall govern in regard to the apportionment made by Article III of this Compact:

(a) The Report of the Engineering Advisory Committee, supplemented by additional data hereafter accumulated, shall be used by the Commission in making administrative determinations.

(b) Unless otherwise determined by the Commission, depletions by man's activities, state-line flows, quantities of water salvaged, and quantities of unappropriated flood waters shall be determined on the basis of three-year periods reckoned in continuing progressive series beginning with the first day of January next succeeding the ratification of this Compact.

(c) Unless and until a more feasible method is devised and adopted by the Commission the inflow-outflow method, as described in the Report of the Engineering Advisory Committee, shall be used to:

- (i) Determine the effect on the state-line flow of any change in depletions by man's activities or otherwise, of the waters of the Pecos River in New Mexico.
- (ii) Measure at or near the Avalon Dam in New Mexico the quantities of waters salvaged.
- (iii) Measure at or near the state line any water released from storage for the benefit of Texas as provided for in subparagraph (d) of this Article.
- (iv) Measure the quantities of unappropriated flood waters apportioned to Texas which have not been stored and regulated by reservoirs in New Mexico.
- (v) Measure any other quantities of water required to be measured under the terms of this Compact which are

susceptible of being measured by the inflow-outflow method.

(d) If unappropriated flood waters apportioned to Texas are stored in facilities constructed in New Mexico, the following principles shall apply:

- (i) In case of spill from a reservoir constructed in and operated by New Mexico, the water stored to the credit will be considered as the first water to spill.
- (ii) In case of spill from a reservoir jointly constructed and operated, the water stored to the credit of either state shall not be affected.
- (iii) Reservoir losses shall be charged to each state in proportion to the quantity of water belonging to that state in storage at the time the losses occur.
- (iv) The water impounded to the credit of Texas shall be released by New Mexico on the demand of Texas.

(e) Water salvaged shall be measured at or near the Avalon Dam in New Mexico and to the quantity thereof shall be added a quantity equal to the quantity of salvaged water depleted by man's activities above Avalon Dam. The quantity of water salvaged that is apportioned to Texas shall be delivered by New Mexico at the New Mexico-Texas state line. The quantity of unappropriated floodwaters impounded under paragraph (d) of this Article, when released shall be delivered by New Mexico at the New Mexico-Texas state line in the quantity released less channel losses. The unappropriated flood-waters apportioned to Texas by this Compact that are not impounded in reservoirs in New Mexico shall be measured and delivered at the New Mexico-Texas state line.

(f) Beneficial use shall be the basis, the measure, and the limit of the right to use water.

ARTICLE VII

In the event of importation of water by man's activities to the Pecos River Basin from any other river basin the state making the importation shall have the exclusive use of such imported water.

ARTICLE VIII

The provisions of this Compact shall not apply to, or interfere with, the right or power of either signatory state to regulate within its boundaries the appropriation, use and control of water, not inconsistent with its obligations under this Compact.

ARTICLE IX

In maintaining the flows at the New Mexico-Texas state line required by this Compact, New Mexico shall in all instances apply the principle of prior appropriation within New Mexico.

ARTICLE X

The failure of either state to use the water, or any part thereof, the use of which is apportioned to it under the terms of this Compact, shall not constitute a relinquishment of the right to such use, nor shall it constitute a forfeiture or abandonment of the right to such use.

ARTICLE XI

Nothing in this Compact shall be construed as:

(a) Affecting the obligations of the United States under the Treaty with the United Mexican States (Treaty Series 994);

(b) Affecting any rights or powers of the United States, its agencies or instrumentalities, in or to the waters of the Pecos

River, or its capacity to acquire rights in and to the use of said waters;

(c) Subjecting any property of the United States, its agencies or instrumentalities, to taxation by any state or subdivision thereof, or creating any obligation on the part of the United States, its agencies or instrumentalities, by reason of the acquisition, construction or operation of any property or works of whatever kind, to make any payment to any state or political subdivision thereof, state agency, municipality or entity whatsoever, in reimbursement for the loss of taxes;

(d) Subjecting any property of the United States, its agencies or instrumentalities, to the laws of any state to an extent other than the extent to which such laws would apply without regard to this Compact.

ARTICLE XII

The consumptive use of water by the United States or any of its agencies, instrumentalities or wards shall be charged as a use by the state in which the use is made; provided, that such consumptive use incident to the diversion, impounding, or conveyance of water in one state for use in the other state shall be charged to such latter state.

ARTICLE XIII

This Compact shall not be construed as establishing any general principle or precedent applicable to other interstate streams.

ARTICLE XIV

This Compact may be terminated at any time by appropriate action of the legislatures of both of the signatory states. In the event of such termination, all rights established under it shall continue unimpaired.

ARTICLE XV

This Compact shall become binding and obligatory when it shall have been ratified by the legislature of each State and approved by the Congress of the United States. Notice of ratification by the legislature of each State shall be given by the Governor of that State to the Governor of the other State and to the President of the United States, and the President is hereby requested to give notice to the Governor of each State of approval by the Congress of the United States.

In Witness Whereof, the Commissioners have executed three counterparts hereof each of which shall be and constitute an original, one of which shall be deposited in the archives of the Department of State of the United States, and one of which shall be forwarded to the Governor of each State.

Done at the City of Santa Fe, State of New Mexico, this 3rd day of December, 1948.

QUESTIONS PRESENTED

The objections of both states will address the following questions:

1. Is the 1947 Condition, as that term is used in the Pecos River Compact, an artificial condition defined by the Engineering Reports contained in S.D. 109, or is it a condition or situation of physical circumstances existing in the river basin in 1947, except for any increases due to development of the Carlsbad Project to 25,055 acres and development of the Fort Sumner Project to 6,500 acres?

- a. Do the actions of the Pecos River Commission between 1949 and 1962 constitute a construction of the compact?

- b. Does the 1947 condition stage of development include development which occurred in the year 1947?
 - c. Does the 1947 condition stage of development include the ultimate depletion of stream flow that would result from ground water development existing in 1947?
 - d. Did the Master err in refusing to admit New Mexico's evidence respecting the intent of the negotiators concerning the meaning of the term "1947 condition"?
2. Is the Pecos River Commission empowered to correct mistakes and omissions in the inflow-outflow computations and criteria used to describe the "1947 condition?"

STATEMENT OF THE CASE

The Complaint of the State of Texas asserts that the State of New Mexico has violated her duties and obligations under the compact. The relief prayed for is a decree of the Court commanding New Mexico to "deliver water in the Pecos River at the Texas-New Mexico state line in accordance with the provisions of the Pecos River Compact" and for such other relief as may be appropriate. New Mexico's Answer denies that she has violated her duties and obligations under the compact and asserts that she has delivered water in accordance with its provisions.

By Pre-Trial Order dated October 31, 1977, the Court's Special Master divided trial of the case into two parts in order to accommodate the way in which the compact was designed to operate. Pursuant to the apportionment provision of the compact, New Mexico is obliged not to deplete by man's

activities the flow of the Pecos River at the state line below an amount equivalent to that available to Texas under the "1947 condition;" New Mexico's obligation does not extend to depletions caused by natural phenomena such as channel deterioration, consumption by phreatophytes, or seismic disturbance. Administratively, however, the sum of increased depletions including those caused by both man and nature must be determined initially. Once this gross indicated departure from New Mexico's delivery obligation is determined, the compact requires a commission finding of how much of the departure was caused by man's activities undertaken after 1947.

Trial was divided accordingly. During the first phase of trial, evidence was taken respecting the meaning of Article III (a) of the compact so that gross indicated departures might be determined. The second phase of trial, which has yet to be conducted, will be devoted to the determination of which indicated departures, if any, were caused by man's activities.

Essentially three issues were to be determined during the first phase of trial: (1) whether the description of the "1947 condition" contained in certain engineering reports is subject to correction in order to better ascertain New Mexico's obligation; (2) if the reports were subject to correction, whether they were inaccurate in a number of specific ways; and, (3) whether an administrative tool called the Inflow-Outflow Manual needed to be modified or corrected to account for deliveries. The Master's Report of September 7, 1979, represents his findings with respect to the first and third issue, the first being an issue of pivotal importance in determining gross departures. The legal side of the issue related to the power of the Pecos River Commission to make the corrections necessary to accurately describe the 1947 condition.

A fourth issue — perhaps the most significant issue in the case — was ambiguously decided by the Special Master, *i.e.*,

whether New Mexico relinquished her depletions by ground water uses already established but not yet manifested in the flow of the Pecos River. The Master characterized the issue as obscure — “hidden in a mass of semantics and mathematics” (Report of Special Master on Obligation of New Mexico and Texas Under the Pecos River Compact, Sept. 7, 1979, p. 44). In response to both parties’ contentions in this regard, the Master “reject[ed] them as having no bearing on the meaning of the term ‘1947 condition.’ ” (*Id.* at 50). This issue will be addressed in detail hereinafter.

The case is inordinately complicated. Most of the initial compact-related documents appear in S.D. 109, including the Report of the Engineering Advisory Committee, the Supplement to the Report January 1948, and the Manual of Inflow-Outflow Methods, which contain the data and engineering procedures basic to the compact’s contemplated administration. It has been clear to both states from the earliest days of administration, however, that many of the factual assumptions and engineering determinations in the original engineering reports were erroneous or incomplete, resulting in the Pecos River Commission’s inability to administer the compact.

By the Compact’s terms the commission was empowered to continually acquire new data to supplement the original studies. The initial efforts at administration revealed numerous errors in the Manual of Inflow-Outflow Methods, the basic administrative tool, and the engineer advisors to the commission promptly set out to make the manual workable. Instead of developing efficacious administrative procedures, however, the cooperative work of the states’ representatives produced a growing awareness that the basic engineering studies originally thought to have accurately depicted the states’ agreement on apportionment, were in error — often grossly so. Accordingly, the compact commission created a special subcommittee of engineers to restudy the basic data and procedures.

The report of the Engineering Advisory Committee and the special inflow-outflow subcommittee, entitled the Review of Basic Data, was formally adopted by the Pecos River Commission on January 31, 1961. In the belief that the original data was sufficiently corrected to facilitate commission findings respecting New Mexico's delivery obligation, the commission on November 9, 1962 made formal findings for the period 1950 through 1961. It was determined that there had been an accumulated gross departure of 5,300 acre-feet, but no determination was made respecting whether the departure had been caused by man's activities or by nature.

The compact commission again assigned the inflow-outflow subcommittee the duty of completing the review of basic data and the procedures outlined in the inflow-outflow manual, but cooperation became progressively more difficult between 1963 and 1969. Finally, in 1970, the Texas compact commissioner "repudiated" the work of the Pecos River Commission and urged that delivery computations be redone on the basis of the original, discredited data and procedures.

In his Report of September 7, 1979 the Master found that:

(n)either the 1947 routing study, nor any other portion of the various engineering reports, appendices, and supplements, supplies adequate information or direction to permit the use of the inflow-outflow method in [the] determination of stream depletion by New Mexico. (Report, Sept. 7, 1979, p. 41).

The dispute between the states centers around the selection of basic data and engineering techniques requisite to an accurate and usable depiction of the agreement embodied in the apportionment provisions of the compact.

GENERAL STATEMENT OF FACTS

In his report the Master provides the Court with an abbreviated explanation of the nature of the Pecos River Compact, its negotiation, and its administrative history. A complete explanation of the relevant factual history would comprise volumes. The essential history follows.

Hydrologically, the Pecos River is one of the most complicated rivers in the United States.

The April 2, 1942, letter transmitting the report, "Pecos River Joint Investigation — Part X" to Dr. B. M. Woods, Chairman, Water Resources Committee, of the National Resources Planning Board, signed by Royce J. Tipton, *et al.*, (Stip. Ex. 17a, Letter of April 2, 1942, p. vi) contains the following paragraph:

For its size, the basin of the Pecos River probably presents a greater aggregation of problems associated with land and water use than any other irrigated basin in the Western United States. This involves both quantity and quality of water supplies, the problem of salinity being particularly acute; erosion and silting of reservoirs and channels; damage from floods; and interstate controversy over the use of the waters. There is an abundance of good lands so that the limit of development is the availability of water of satisfactory quality. *The use of the water of the river has been fully appropriated.* Special characteristics of the stream and its basin are: The large irrigation development based upon ground water supply in the Roswell Artesian area; the extremes of salinity of water of the river at different times and in different portions of the basin; the disappearance of stream flow through deep percolation and its reappearance in the form of springs, recurring many times in the length of the stream; and

the extent to which irrigation must depend upon the conservation of flood flows. (emphasis supplied).¹

In common with most western streams, Pecos River flows vary greatly from day to day, season to season, and year to year. This characteristic is exaggerated for the Pecos River because only a small part of its flow is derived from snowmelt; for the most part, the flow of the Pecos River is dependent on flash floods from thunder storms. Compounding the capricious nature of the river's hydrology for the compact negotiators, was the fact that the water of the river was fully appropriated. The fundamental purpose of the compact was "to make secure and protect existing development within the states. . . ." (Art. I). To accomplish that purpose the compact set up a mechanism whereby both states would undertake to salvage water that was being non-beneficially consumed in order to provide the water necessary to preserve the status quo.

The compact apportions three kinds of water: 1) water which is equivalent to that which was being received by Texas under the 1947 condition and that which New Mexico was using under the 1947 condition, 2) salvaged water, and 3) unappropriated flood water. (S.D. 109, p. 115). To accomplish a division of Pecos River waters the negotiating commissioners selected the "inflow-outflow method" for administration of the compact. [Art. VI(c)]. The inflow-outflow method involves the correlation of an index of the inflow to a basin as

1. The "Pecos River Joint Investigation" was undertaken at the request of both New Mexico and Texas. It was financed by the Public Works Administration, and the work of various state and federal agencies was supervised by the National Resource Planning Board. Royce J. Tipton, who directed the Pecos River Joint Investigation, was appointed as the engineer advisor to the federal representative to the negotiating commission and became the principal protagonist in the conceptualization of the Pecos River Compact.

measured at certain gaging stations and the outflow from the basin (S.D. 109, p. 149). Given the objectives of the negotiating commissioners and the extreme variability of the river flow, it was obvious that a compact provision based on the inflow-outflow method had advantages over a compact that would have required a fixed annual stateline delivery or a fixed annual consumptive use in New Mexico without regard to the annual supply. The engineer advisors specifically recommended against a compact based on irrigated acreage because the effect of irrigation on stateline flow is greatly dependent on natural losses of water from the river channel. The depletion of stream flow upstream by consumptive use of water for irrigation or other purposes is much less than the same depletion near the stateline because the upstream use reduces natural losses from the stream channel. (S.D. 109, p. xxxiv).

The engineer advisors also recommended against a compact in which the delivery obligation would be based on a schedule relating the obligation to the flow at some upstream gage without regard to changes in depletion resulting from natural causes. (S.D. 109, p. 117). This recommendation arose out of experience under the Rio Grande Compact. There, the major floods of 1941 and 1942 resulted in channel deterioration beyond the capability of the upstream state (New Mexico) to repair, with the consequence that increased natural losses made it impossible for the state to meet its delivery obligations based on the flow at the upstream gage, without terminating beneficial consumptive use.

While the inflow-outflow method is a tool carefully selected for the Pecos River Compact administration, its utilization cannot be free of problems. For example, the index inflow chosen for the Alamogordo Dam to stateline reach of the river is the flow at Alamogordo Dam plus all flood inflow between Alamogordo Dam and the stateline. Less than one-half of that

index inflow is subject to direct measurement by the gage at Alamogordo Dam. Determination of the unmeasured flood inflows arising between Alamogordo Dam and the stateline depends on engineering judgments and estimates involving both depletions by man's activities and natural losses.

The principal difficulty with the utilization of the inflow-outflow method for the administration of the Pecos River Compact arises out of the provision of Art. III(a) of the compact, which states that ". . . New Mexico shall not deplete by man's activities the flow of the Pecos River at the New Mexico-Texas stateline below an amount which will give to Texas a quantity of water equivalent to that available to Texas under the 1947 Condition." Under Art. III(a) any depletion of the stateline flow by the encroachment of phreatophytes or as a result of channel deterioration is not chargeable against New Mexico as it is under the terms of the Rio Grande Compact. The provision makes it necessary to distinguish between depletions resulting from man's activities undertaken after 1947 and increases in natural losses after that date.

In the process of selecting principles for a compact, the negotiating commission set out to appraise, among other things, "the probable effect of measures now proposed to remedy . . . existing conditions" (S.D. 109, p. xxv), namely the condition of substantial natural losses (non-beneficial uses). To do so the commission undertook a number of river studies designed to analyze the river under varying conditions of use. One of the conditions studied was the "1947 condition," which, as of January, 1948, represented "present conditions on the river." (S.D. 109, p. xxvi). With respect to each condition, a river routing study was prepared, mathematically routing river flows through various sets of circumstances in order to determine the cumulative effects of those circumstances on river flow at critical points such as the state line. Each condition served

as a principle upon which a compact might have been negotiated, permitting the Engineering Advisory Committee to reason from given conditions to the water yield that might have been expected from each condition. The essential element of the potential bases of the compact was in each instance a set of circumstances or a condition on the river sought to be arithmetically described, the amount "available" to Texas under each condition being no more than the arithmetical result of each attempted description. The agreement ultimately reached by the negotiators was grounded upon one such set of circumstances on the river and not upon the resulting delivery expectations that Texas might have had by routing various amounts of water through that condition.

The condition agreed upon was meant to describe the stage of development and the physical environment as of 1947. Art. III(a) obligated New Mexico not to "deplete by man's activities the flow of the Pecos River at the New Mexico-Texas stateline below an amount which will give to Texas a quantity of water equivalent to that available to Texas under the 1947 condition." The article requires a comparison of stateline Pecos River flows with the flows that would have reached the state-line under the 1947 condition. Departures from the 1947 condition would then be analyzed in a subsequent administrative step to determine what part of any indicated departure resulted from changes in depletion due to man's activities.

In Art. II(g) the compact defines "(t)he term '1947 condition' " as that situation in the Pecos River Basin as described and defined in the Report of the Engineering Advisory Committee. . ." The compact mandates the continual collection of Pecos River data and authorizes the use of "additional data hereafter accumulated. . . to supplement the Report of the Engineering Advisory Committee. . . in making administrative determinations." [Arts. V(d) 4-10 and VI(a)]. The description

is subject to change, as additional data accumulated may require. The situation "1947 condition" may be better described, but it cannot be changed.

Explaining the compact to the negotiating representatives prior to its adoption, engineering advisor Royce Tipton said: ² "The way the Pecos compact is written, the commission has full authority to change the method, or to perfect the technique, so long as what is done by the commission is something that is directed at the determination of the obligation under (III) (a)." (S.D. 109, p. 117). Tipton also explained that "the powers of the commission, broadly, as I understand this, go to the collection and correlation of data and findings of fact with respect to those matters which are important to the administration of the compact." (*Id.* at 123).

The "Summary of Operations - 1947," one of the pre-compact inflow-outflow routing studies, has been taken almost intact into the "Manual of Inflow-Outflow Methods of Measuring Changes in Stream Flow Depletion For Use in the Commencement of Administration of the Pecos River Compact" (the Inflow-Outflow Manual that the Master has determined is ineffective) and rendered there as Plate No. 2. (S.D. 109, p. 154). In offering the manual, its definition of the 1947 condition, and its method of applying subsequent inflow-outflow relationship, the authors stated:

The Pecos River Compact provides that the inflow-outflow method shall be utilized unless otherwise

2. S.D. 109 contains certain essential interpretations of compact provisions, in the form of explanations by Mr. Royce J. Tipton, the Engineering Advisor to the federal representative during compact negotiations. It is clear from the record of the compact negotiation that the compact was approved, article by article, "as explained" by Mr. Tipton. (S.D. 109, p. 111, *et seq.*).

decided by the commission to determine certain items which are important to the administration of the compact. The studies made by the engineering advisory committee of the Pecos River Compact Commission, the results of which are reported in the report of that committee and the supplement thereto, and recorded stream-flows can be used as a basis for the development of the inflow-outflow relationships for certain reach of the river to permit the commencement of the administration of the compact. . . .

In the routing studies made by the engineering advisory committee such items as consumptive use and spring flow were taken as constants. The commission should make studies of such items in order to determine the extent to which they may fluctuate from year to year. . . . In addition to the refinement of such basic data, it may be that refinement of estimating technique can be made of other data such as estimates of flood inflow used in the routing studies which are also used herein to develop inflow-outflow relationships. If this is done, necessarily there must be made a refinement in the inflow-outflow correlation comparable to the refinement in the estimates of the basic data. (S.D. 109, pp. 150-51).

In other words, refinement in the estimating technique in basic data would require a commensurate change in the 1947 condition inflow-outflow correlation to be used to assess deliveries.

Foreseeing possible difficulty in the accurate definition of the 1947 condition necessary to define New Mexico's obligation, the compact authorized the replacement of the inflow-outflow method altogether. Article VI(c) provided that the inflow-outflow method, "as described in the Report of the Engineering Advisory Committee, shall be used. . . unless and until a more feasible method is devised and adopted by the commission."

The compact contemplated the use of three-year moving averages to arrive at gross indicated departures from the 1947 condition. The compact was not to have been self-executing. Mechanically, it depended upon the technical accuracy of the data and estimating procedures upon which New Mexico's annual delivery obligation was to be determined. It also left to the Pecos River Commission, a compact-created, interstate administrative body, the judgment necessary to accept the description of the 1947 condition upon which subsequent compact determinations would be based, to modify the description within the constraints of the inflow-outflow method, or to create a wholly new way of determining departures from the 1947 condition. Pursuant to Art. V(a), only the representatives of the signatory states could vote and both had to concur to effectuate commission action.

At the initial meeting of the commission, each state designated legal and engineering advisors. (Stip. Ex. 4, Minutes, PRC, October 20 and 21, 1949, p. 3).³ A month later, the commission adopted organizational rules which created, *inter alia*, a standing Engineering Advisory Committee to develop the engineering and hydrologic data necessary for the proper

3. Stipulated Exhibit No. 4 contains the minutes of the Pecos River Commission. These minutes, commencing with the October 25, 1956 meeting, are numbered serially in the upper right hand corner of the page. Citations to the minutes commencing with the October 25, 1956 meeting include the date of the meeting and the number appearing at the upper right hand of the page, *i.e.*, October 25, 1956, Minutes, PRC, p. 163. The minutes prior to the October 25, 1956 meeting are either unnumbered or are consecutively numbered within the particular set of minutes. Citations to the minutes prior to the October 25, 1956 minutes include the date of the meeting and the consecutive number of that particular set of minutes, *i.e.*, February 18, 1956, Minutes, PRC, p. 3, where page 3 is the third page of those minutes.

administration of the compact. On December 10, 1949, the commission adopted a program of action, agreeing to proceed with the inflow-outflow computations. The program also called for a more accurate determination of the 1947 condition as defined in the compact. (Stip. Ex. 4, Minutes, PRC, December 9 and 10, 1949, pp. 3 and 4).

Between 1949 and 1952 the engineers attempted without success to make meaningful inflow-outflow computations. In 1952 the Engineering Advisory Committee recommended to the commission that it undertake a review of the inflow-outflow manual and computations resulting from its use. The commission agreed. (Stip. Ex. 4, Minutes, PRC, June 27, 1952, p. 2). The Texas engineering advisor, Mr. Lowry, began that review. By January, 1953, he had submitted to the Engineering Advisory Committee:

... a preliminary report of his studies on the *basis* for the inflow-outflow computations, and suggested certain changes. . . It was agreed that the final result would show *a more accurate measure of the 1947 condition*. . . The final report should be submitted as soon as possible. . . (Stip. Ex. 2, Minutes, EAC, January 21, 1953, p. 2) (emphasis supplied).

Review of the inflow-outflow studies and computations continued through 1956, leading to the conclusion that the methods and technique of the Inflow-Outflow Manual could not be used in compact administration without substantive revision. A report of the Engineering Advisory Committee to the commission made clear that there is error and confusion in the Inflow-Outflow Manual printed in S.D. 109:

The Inflow-Outflow subcommittee has computed the inflow-outflow relationship through 1954 in strict accordance with the letter of the inflow-outflow manual. These efforts have raised some question as to the

accuracy of the language of the manual and as to the manner in which the flood inflows in the Guadalupe-Artesia reach should be determined. The Engineering Advisory Committee has decided that it will be necessary before the computations can be submitted to the Commission, to re-examine the original computations to determine how this item was computed in arriving at the basic compact inflow-outflow relationship. When this has been done, and if the method appears satisfactory, it will be used in recomputing the data. Other refinements of the methods described in the manual will be incorporated in the recomputation. When this work has been done, the Engineering Advisory Committee will submit, for the consideration of the commission, recommendations for revision of the inflow-outflow manual to implement these refinements. (Stip. Ex. 2, Report of Engineering Advisory Committee to the Pecos River Commission, October 25, 1956, p. 3).

The commission accepted the report and formally agreed once again to await the results before making annual determinations. (Stip. Ex. 4, Minutes, PRC, October 25, 1956, p. 167). Neither member state moved for the adoption of the inflow-outflow determination through 1954 based on the unrevised inflow-outflow manual and its Plate No. 2, the original plate, derived from the 1947 condition routing study, depicting the 1947 condition inflow-outflow relationship.

Finally, in April, 1957, the issue of the immutability of the 1947 condition inflow-outflow relationship as depicted in Senate Document 109's Inflow-Outflow Manual, Plate No. 2, formally came to a head. On April 1, the subcommittee presented its report to the Engineering Advisory Committee. (Stip. Ex. 6, Report Inflow-Outflow Subcommittee of the Engineering Advisory Committee to the Pecos River Commission, April 1, 1957). The report included departure determinations for those years. The subcommittee reported that it had

arrived at those departures using techniques different from those in the inflow-outflow manual to determine certain critical values, like flood inflows, necessary to locate the post-1947 inflow point on the existing 1947 condition curve, *i.e.*, Plate No. 2. From that point one would look to the corresponding outflow point on that curve and compare it to contemporaneous outflow data to determine departures for that year. The April 1, 1957 report on departures had altered the manner of entering the 1947 condition curve, but had not changed the curve itself. Nothing had changed the original description of the 1947 condition inflow-outflow relationship.

When the subcommittee offered its report and computations to the Engineering Advisory Committee, a flurry of motions ensued. A Texas representative moved that the report of the Inflow-Outflow Subcommittee, including the computations for the period through 1955, be accepted and turned over to the commission. New Mexico representatives did not second the motion because a number of the problems had not yet been sufficiently studied and resolved. Then a New Mexico representative moved that the Inflow-Outflow Subcommittee report be accepted and transmitted to the Commission, with the understanding that the administrative computations included therein would be subject to revision as new data may become available from continuing consideration and studies such as those listed in the subcommittee report. The Texas representatives declined to second the motion, noting that arithmetical errors should be corrected if discovered at some later date, but that the computations should not be considered to be provisional in other respects.

Finally, the Engineering Advisory Committee agreed to forward the report to the commission "with an explanatory statement of the lack of agreement" as to how and whether it should be adopted. In the process the Texas member of the working

subcommittee explained that the Inflow-Outflow Manual's Plate No. 2 "defined the 1947 condition and was not subject to change on the basis of later information." The New Mexico member replied that "as additional information becomes available it should be utilized, where possible, to better define the 1947 condition." The chairman of the committee explained the two alternatives expressed by the opposing views as a choice between accepting the 1947 condition inflow-outflow curve based on the pre-compact work of the Engineering Advisory Committee depicted in the Inflow-Outflow Manual's Plate No. 2 or developing new computations to describe the base 1947 condition.

Thus the issue that now divides the two states was squarely presented twenty years ago. In response, the chairman of the Engineering Advisory Committee directed the fundamental question to the standing Legal Advisory Committee. Speaking for the legal committee on July 29, 1957, the Texas legal advisor told the Engineering Advisory Committee that the compact permitted alteration of the description of the 1947 condition against which subsequent years would be compared to determine departures. Based on that answer, the chairman discharged the existing inflow-outflow subcommittee, indicated that he would forward that subcommittee's April 1, 1957 report with its departure figures based on an unaltered 1947 condition standard to the commission, and appointed a new subcommittee "to carry out the work of reviewing the engineering data and processes which describe the '1947 condition.' " (Stip. Ex. 2, Minutes, EAC, July 29-30, 1957, pp. 1-4).⁴

In its simultaneous report to the Pecos River Commission, the Engineering Advisory Committee said that it recognized

4. Engineering Advisory Committee Minutes are numbered consecutively from the beginning page of each set of minutes.

that the 1947 condition is inviolate, but that the committee could not agree whether "the curves depicting index inflow vs. outflow as shown on pages 153 and 154, Senate Document 109 . . . were subject to revision." (Stip. Ex. 2, Minutes, Report of EAC to PRC, July 30, 1957, pp. 1-7). Based on the legal advice it had been given, the Engineering Advisory Committee itself recommended, among other things:

3. That a special subcommittee be created to re-study under the 1947 conditions the inflow-outflow relationships for the reach of the river above Alamogordo Dam to the New Mexico-Texas state line. The purpose of the re-study is to determine whether the relationships depicted by the curves appearing on pages 153 and 154 of Senate Document 109. . . should be modified. (Stip. Ex. 4, Minutes, PRC, July 29, 1957, p. 174).

Speaking for the commission's Legal Advisory Committee at the full commission meeting the next day, the Texas legal advisor, who had participated in the compact negotiations, repeated his conclusion that the commission had the power under the compact to alter the engineering description of the 1947 condition, although it couldn't alter the 1947 condition itself. The commission adopted his report and its conclusion. Both member states then adopted the Engineering Advisory Committee's third recommendation, calling for a re-study of the 1947 condition with the declared purpose of possibly changing its description. (*Id.*).

The commission had before it annual computations of departures from the "1947 condition" for the period through 1955 based on the pre-compact description of that condition. Neither state moved the commission to adopt those departures as the beginning place for determining which of them were caused by man's activities. Instead, both states agreed that it was more appropriate and more important to re-examine the description of the base-line "1947 condition."

Pursuant to commission approval and adoption of the Engineering Advisory Committee's July 30, 1957 recommendation that the 1947 condition be re-studied, the Engineering Advisory Committee formed a new "subcommittee on the review of basic data." By November 13, 1957, the subcommittee had started work and had turned, as it often would over the next three years, to the Engineering Advisory Committee for the resolution of particular problems. (Stip. Ex. 2, Minutes, EAC, November 13-14, 1957, p. 1). The particular problems involved possible changes in values to be attributed to component parts of the 1947 condition routing studies.

Many of the problems were resolved at the subcommittee or Engineering Advisory Committee level and the solution embodied in the subcommittee's submittal to the Engineering Advisory Committee on October 24, 1960 and then to the Pecos River Commission itself on October 27, 1960. (Stip. Ex. 2, Minutes, EAC, October 24, 1960, p. 3; Stip. Ex. 4, Minutes, PRC, October 27, 1960, p. 222). The Review of Basic Data's changes in defining the 1947 condition are particularly important for they show the multi-level administrative consensus between the working subcommittee, its engineering committee sponsor, and the Pecos River Commission, and for the implications the consensus of opinion bears on the question of assumptions shared by the two states in authorizing and approving the Review of Basic Data.

As a part of the work undertaken at specific commission direction the subcommittee, in addition to the preparation of the Review of Basic Data, made the routing studies necessary for developing new inflow-outflow correlation curves for the 1947 condition and the computation of departures, if any, of measured stateline flows from the stateline deliveries indicated by those curves. (Stip. Ex. 4, Minutes, PRC, October 27, 1960, p. 223).

Less than three months later, on January 30, 1961, the Engineering Advisory Committee considered the subcommittee's Report on Review of Basic Data, supplemented by much of the information requested of it at the previous October meetings. Item 6 of the report presented a revised version of Senate Document 109's Plate No. 2 that made the changes graphic. The report contained a September 12, 1958 letter from Royce J. Tipton, the author of the pre-compact engineering studies. That letter concludes:

It is obvious that revisions should be made in the basic inflow-outflow relationships presented in the 1948 Inflow-Outflow Manual to reflect where indicated more accurate determinations of 1947 conditions. . . (Stip. Ex. 2, Minutes, EAC, January 30, 1961, p. 1).

The Engineering Advisory Committee adopted the report and approved it for submission to the commission.

On January 31, 1961, the Pecos River Commission followed suit. The resolution adopting the reports which included the determination of departures for the period 1950-1959 described these changes as "amendments, refinements and additions to the basic data of the Commission. . . considered as such in all actions and findings of the Commission, and as representing the present best information on the subjects covered thereby." Having re-evaluated the lower, more extensive reach of the river to provide a new, commission-approved description of the 1947 condition standard against which subsequent years' index inflows and outflows could be assessed to determine departures, the commission adopted formal findings of fact which had been prepared jointly by the states and presented first to the Engineering Advisory Committee for its approval. Having fixed a firm foundation against which to measure subsequent three-year average inflows and outflows,

the task of determining departures became possible. (Stip. Ex. 4, Minutes, PRC, January 31, 1961, p. 250).

In adopting these and other recommendations for the criteria defining the 1947 condition and the routing studies based on them, the commission formally approved necessary revisions and modifications in the inflow-outflow correlation curve for the reach of the river between Alamogordo Dam and the stateline set out in the Manual of Inflow-Outflow Methods in S.D. 109. The State of Texas, through its members on the Review of Basic Data Subcommittee and the Engineering Advisory Committee, as well as through its commissioner, concurred in this action. The inflow-outflow subcommittee report adopted by the commission in its 1961 meeting did not purport to be a final response to the July 30, 1957 commission assignment, but rather constituted a first stage report limited to necessary revisions of data and procedures related to the critical reach of the river between Alamogordo Dam and the stateline.

At its meeting on November 9, 1962, the Pecos River Commission approved, as its Engineering Advisory Committee had the day before, annual and three-year computations for 1950-1961 which showed an aggregate negative departure at the stateline through 1961 of 53,300 acre-feet. (Stip. Ex. 4, Minutes, PRC, November 9, 1962, pp. 257-258). Upon undertaking to determine what part of the indicated gross departure was attributable to man's activities pursuant to Art. III(a), the commission concluded that only 5,300 acre-feet conceivably could have been charged to New Mexico under the compact.

The commission never directed its standing committee or working subcommittee to divide that remaining 5,300 acre-foot departure between those attributable to man's activities and those not. The relatively short reach of the river above Alamogordo Dam had not had the benefit of re-analysis to

re-define its 1947 condition. It was reasonable to believe that the indicated departure would be balanced when the Review of Basic Data was completed. An inflow-outflow method had been used to compute departures for the 1950-1961 period, but no new manual reiterating the technique and methods described in the Review of Basic Data had been approved. Instead, salt cedar eradication and salinity control came increasingly to occupy the attention of the commission and its various committees.

However, by January 1961, the Pecos River Commission and its members' states had arrived at an acceptable definition of the immutable, compact-mandated 1947 condition for the critical reach of the river below Alamogordo Dam. On January 31, 1961, the commission formally adopted the Review of Basic Data and its appendices as "findings of fact of the Commission" pursuant to Art. V(d) 5-8. While the compact and the commission's findings still left the revised and corrected description of the 1947 condition subject to further revision and refinement, the commission had the tools to proceed with compact administration. (Stip. Ex. 4, Minutes, PRC, January 31, 1961; Stip. Ex. 2, Minutes, EAC, January 30, 1961).

There were no meetings of the Engineering Advisory Committee between November, 1962, when the chairman instructed the inflow-outflow subcommittee to complete the formal revised manual (Stip. Ex. 2, Minutes, EAC, November 8, 1962, p. 3), and December 5, 1966, when the Engineering Advisory Committee met to consider the federal salinity project at Malaga Bend and prospects for salvaging Pecos River water. (Stip. Ex. 2, Minutes, EAC, December 5-6, 1966). By March, 1963 the inflow-outflow subcommittee had prepared a draft of an inflow-outflow manual for the Alamogordo Dam-stateline reach, but the draft had never been presented to the Engineering

Advisory Committee. (Stip. Ex. 2, Minutes, EAC, February 20, 1967, p. 2). In the interim, the Pecos River Commission concerned itself with salt cedar eradication and salinity projects; salt cedar promised sufficient salvage of water to cover the depletion in base inflow foreseen in the 1948 studies. (Stip. Ex. 4, Minutes, PRC, December 30, 1963, October 23, 1964, January 22, 1965, January 20, 1966). Neither state demanded delivery computations.

In 1967 the commission returned its attention to the allocation provisions of the compact. In January of that year, the existing inflow-outflow subcommittee indicated to the commission that it would complete the 1957 assignment shortly. (Stip. Ex. 4, Minutes, PRC, January 26, 1967, p. 311). By April, 1967, the subcommittee had submitted to the Engineering Advisory Committee a proposed inflow-outflow manual for the Alamogordo Dam-stateline reach based on the Review of Basic Data's description of the 1947 condition relationship. (Stip. Ex. 4, Minutes, PRC, November 6, 1968, p. 325). By November 1969, New Mexico had transmitted to Texas computations of inflows and outflows between Alamogordo and the stateline for the 1962-1968 period. Texas's acceptance, rejection, or modification of the proposed computations, based on standards already accepted by Texas, was prerequisite to commission action on departures those computations might indicate. Texas never responded.

In an apparent attempt to head off a developing impasse, the Engineering Advisory Committee met in early 1969 to reconstitute itself and its working subcommittee. (Stip. Ex. 2, Minutes, EAC, January 19, 1969, p. 1). In its subsequent report to the commission, the reconstituted Engineering Advisory Committee recommended a detailed schedule for completion of the work already begun pursuant to the commission's 1957 assignment. The proposals would be built on those

computations already accomplished by the Review of Basic Data and accepted by the commission. None would have required more than four years to complete and many of the proposed items would have been finished much sooner. (Stip. Ex. 4, Minutes, PRC, January 23, 1969, p. 342). The commission adopted the recommendations and the proposed timetable.

At a special commission meeting on July 21, 1970, the Texas commissioner, who had been appointed October 30, 1968, read a letter demanding that the commission account for the delivery of Pecos River water on the basis of the pre-compact engineering analysis of the 1947 condition. "Please consider this letter," the Texas commissioner concluded, "as my respectful request that the engineering representatives of both states address themselves to this matter so that at the annual meeting in January the affairs of the Pecos River Compact Commission can be brought forward as contemplated by the compact." (Stip. Ex. 4, Minutes, PRC, July 21, 1970, p. 360). Six months before, on December 5, 1969, the Attorney General of Texas had construed the Pecos River Compact to allow the commission to adopt, as it had done, the Review of Basic Data.

At the annual meeting in January, 1971, the Texas engineering advisors announced that, after 500 man days of work, Texas had determined that using the original engineering data, New Mexico deliveries were "delinquent" in the amount of 1,100,000 acre-feet since the inception of the compact. The New Mexico engineering advisors defended the necessity for and accuracy of the Review of Basic Data's revisions to the 1947 condition and the revised method of comparing annual inflow-outflow computations to it. (Stip. Ex. 4, Minutes, PRC, January 28, 1971, p. 384). At its next annual meeting the commission responded to the dilemma by directing the Engineering

Advisory Committee to make comparative studies between the two views and to complete the original 1957 assignment. (Stip. Ex. 4, Minutes, PRC, February 10, 1972, p. 413). A year later, the commission received a report from the inflow-outflow subcommittee describing the status of the work allotted to the representatives of both states. The commission then reaffirmed its instruction of the previous year to the Engineering Advisory Committee. (Stip. Ex. 4, Minutes, PRC, February 8, 1973, p. 431).

At the commission meeting of February 21, 1974, the Texas commissioner formally announced Texas's "repudiation of the Review of Basic Data and all prior agreements and actions by the Commission," because, in his view, the Review of Basic Data had "operated to deprive Texas of water." (Stip. Ex. 4, Minutes, PRC, February 21, 1974, p. 472).

This suit followed.

SUMMARY OF ARGUMENT

New Mexico objects to two aspects of the Special Master's conclusion respecting the 1947 condition stage of development: 1) his *sua sponte* determination that the compact negotiators "must have intended" that the 1947 condition stage of development ended on January 1, 1947, instead of including development completed during the year 1947 and, 2) his apparent oral construction of his 1947 condition conclusion which would deprive New Mexico of that portion of ground water development existing in 1947, the effects of which had not yet been manifested in the river in the form of base inflow diminution.

With regard to the cutoff date the Master surprised both states. Neither state discerned an issue, and it is apparent that

Texas shared New Mexico's view until the Master independently reached his conclusion. The explanation of the compact to the negotiating commissioners and engineers by Mr. Tipton, the man primarily responsible for its creation, and the history of the compact's post-ratification administration, provide unequivocal support for the fact that the 1947 condition stage of development included 1947. New Mexico's tendered testimony on the subject, which was rejected by the Master, would have left no doubt in anyone's mind, assuming there was reasonable cause for doubt in the first place.

With regard to ground water uses the question is whether New Mexico is entitled to make the base inflow depletions that would result from the 1947 condition stage of development but which were then not manifest in the surface flow of the river. Literally, the Master's conclusion states New Mexico's view of the matter, though the Master has construed his conclusion to mean that the 1947 condition stage of development does not include ground water uses existing in 1947 unless the effects of those uses had reached the river by then.

The Master apparently reached his conclusion on the basis of a sequence of negotiation facts, but it is not possible to reason to such a conclusion on the basis of the sequence of facts he relied upon. When properly understood the apportionment mechanism embodied in Art. III(a) of the compact resolves the question of base inflow diminution through its reliance on water salvage as mandated by Arts. I and IV(a) of the compact. Without reference to the water salvage provisions, the apportionment established in Art. III(a) does not make sense, and the Master's refusal to consider those provisions precludes an understanding of the essence of the compact's apportionment.

While no legislative history exists in either Texas or New Mexico on the intent of the compact negotiators, the record shows that it was contemporaneously understood that the New

Mexico legislature would not have ratified the compact as orally construed by the Master. The Master also erred in rejecting New Mexico's evidence of compact intent on principles of evidence relating to legislative intent, while admitting Texas's evidence of compact intent on principles of contract construction.

ARGUMENT

POINT I: THE 1947 CONDITION STAGE OF DEVELOPMENT INCLUDES DEVELOPMENT MADE DURING 1947.

The Special Master surprised both states by finding that the 1947 condition stage of development is that "existing at the beginning of the year 1947." During oral argument on the parties' objections to the Master's initial report of February 2, 1979, he stated:

I know very well that neither State had anything to say during all these hearings as to the specific date for the 1947 condition. Now, it just seems to the Master that if you are going to try and define the 1947 condition, you have to have a specific beginning place, and since nobody has discussed it, the Master did his best in figuring out what he thought to be a *fair* beginning date. Neither one of you said anything about it during all these hearings we had and I think it is unreasonable to assume that conditions during the whole year of 1947 were the same as they were during the year 1946. (Tr. 2950) (emphasis added).

Notwithstanding the lack of dispute between the parties, the Master found some "doubt . . . whether the situation is that existing in 1947 or at the beginning of the year 1947." (Report, Sept. 7, 1979, p. 16). In concluding that "the engineers' intent

must have been to relate the 1947 condition to that existing at the beginning, not the end, of 1947," the Master-noted that:

The 1947 routing study is contained in a January, 1948, engineering report and covers the years 1905-1946. It contains no 1947 figures and probably could not because it is unreasonable to believe that those figures could have been available for inclusion in the complicated study presented. After referring to PRJI, Stip. Ex. 11(b), the engineers said, S.D. 109, p. 34: 'No further development has taken place since 1940.' On the record presented, some doubt exists whether the reference is to the Upper Reach, the Middle Reach, or both. No evidence was presented on the development, or any change in development, after 1940. (Report, Sept. 7, 1979, p. 16).

The view that the negotiators "must have intended" that 1947 development was not included because the data were derived from the period 1905-1946 is wrong as a matter of fact. Further, the development referred to following the reference to PRJI was the development in the upper reach of the river, and it was on this basis that the annual Guadalupe inflow figures appearing in Column 1 of the routing study given in Appendix A of the Master's September 7, 1979 Report were adjusted to reflect the '47 condition on the basis of 1939 information. The development in the middle reach, on the other hand, was not static. By relating the 1947 condition stage of development to January 1, 1947, instead of considering the situation in the year 1947, New Mexico would lose that substantial part of the ground water usage that was developed during 1947. Cf. Report of the Technical Assistant to the Special Master, December, 1978, Hogan Exhibit 1.

There is *no* evidence in the record to support the Master's supposition. There is considerable evidence, however, to

support the fact that the end of the year 1947 was considered as delimiting the '47 condition stage of development. The record is uncontradicted: 1) Tipton's explanation of the compact included all of 1947; 2) available 1947 data were utilized in S.D. 109; 3) administrative action establishes that the development accomplished in 1947 was part of the condition, 4) the parties did not view the matter as questionable, and 5) New Mexico's tendered testimony, which was rejected, establishes that the 1947 condition included 1947.

Mr. Tipton viewed the '47 condition as a condition existing in 1947 instead of January 1, 1947:

There were certain conditions that existed on the river, such as the diversion requirements of the Carlsbad Project, which the engineering advisory committee assumed; the salt cedar consumption; the reservoir capacities that *existed in 1947*; the operation of the Fort Sumner project up to 6,500 acres; and the operation of all other projects on the stream *as they actually existed in 1947*. It must be understood that the term '1947 condition' relates to the condition described in the report and does not relate to the water supply *that occurred in the year 1947*. (S.D. 109, p. 113) (emphasis added).

Mr. Tipton's understanding was also revealed in his explanation of water salvage:

Mr. Tipton: That is correct, and it is important to keep in mind the term 'quantity of water' because in the future there may be some salvaged. Regardless of the place, any water salvaged up to the *quantity that was being non-beneficially consumed in 1947* is termed 'water salvaged.' (S.D. 109, p. 114) (emphasis added).

Further, the discussion in the Inflow-Outflow Manual relating to the use of Plate No. 2 reflects the same understanding: "The

outflow will consist of the actual recorded outflow at the State line plus any depletions made by Texas of the waters of the Delaware River *after 1947.*" (S.D. 109, p. 155) (emphasis added).

When 1947 data were available they were used in the engineering reports in S.D. 109. For instance, Plates Nos. 5 through 10 of the Inflow-Outflow Manual, which were drawn to describe the 1947 condition, include data for the year 1947.

Contemporaneous administrative action also shows that development during the year 1947 was included. The Review of Basic Data was done under the supervision of Mr. Tipton, then chairman of the Engineering Advisory Committee, and Mr. Erickson, chairman of the special subcommittee. Both men were key figures in the compact negotiations. Neither of them ever expressed any doubt that the year 1947 was included within the ambit of the '47 condition. The Review of Basic Data utilized 1947 stream flow records. The actual situation during 1947 was used in determining the flows of Major Johnson and Carlsbad springs, the irrigation depletion below Carlsbad, and the potash plant uses. At its meeting on January 31, 1961, the commission approved the Review of Basic Data.

At its second meeting on December 9 and 10, 1949, the Pecos River Commission instructed the engineers to determine more accurately the 1947 condition as defined by the compact. In making their determination they were to have obtained aerial photos of the river bottom land and possibly photos of all the irrigated lands below Alamogordo Reservoir. The engineers obtained two sets of photographs covering the Pecos River in New Mexico. One set, made in the fall of 1946, was purchased from Muldrow Aerial Surveys, and the second set was compiled from a flight made in 1950 under contract with the Pecos River Commission. The engineers interpolated

between the 1946 and 1950 photos to determine the 1947 condition. It is clear from the series of maps produced from this effort and the language included in their report to the commission, entitled "Report on Aerial Surveys and Preparation of Maps Delineating Water Consuming Area as of 1947," that the 1947 condition was the condition found in 1947. Had the engineers, including Mr. Tipton, Mr. Lowry, and Mr. Erickson, interpreted the 1947 condition development to have been cut off at January 1, 1947, the Muldrow aerial photos, which were taken in the fall of 1946, could have been used to determine the 1947 condition without interpolation.⁵

Finally, the record shows that Texas has never had any doubt regarding the period of time within the embrace of the 1947 condition. The issue was not encompassed by the Pre-Trial Order. Counsel for Texas repeatedly described the condition with phrases like "the way things were in 1947" and "what was occurring in 1947." See, e.g., Deposition of John Erickson, November 23, 1976, pp. 36, 40-42. When the time element is expressly described, the phrases "in 1947" and "after 1947" are used; never was any significance attributed to January 1, 1947. See, e.g., Tr. 625.

Following the Master's *sua sponte* determination that the 1947 condition stage of development did not include the year 1947, the parties were afforded the opportunity to object. Both parties filed objections with the Master on April 6, 1979, and on April 24, 1979, the Master heard oral argument on the objections. During argument New Mexico tendered the testimony of John Erickson, who was a member of the Engineering

5. The photos and maps are not in evidence because New Mexico did not believe the matter presented an issue. They are referred to, however, in Stip. Ex. No. 4, the Minutes of the 11th meeting of the Pecos River Commission on January 22, 1953, and are a part of the commission records.

Advisory Committee in 1948. Going straight to the suppositional nature of the Master's determination, the following transpired:

Q. (By Mr. Tansey, representing New Mexico)

Mr. Erickson, do you recall any discussion or decision at any time during Compact negotiations that proposed to establish the 1947 condition as of January 1, 1947?

A. No, sir.

Q. Does the fact that routing studies ended with 1946 have any significance other than that was the last information available?

MR. CAROOM: Objection, Your Honor.

SPECIAL MASTER: The objection will be noted and overruled. You may answer.

Q. (By Mr. Tansey) Does it have any significance in relation to the 1947 condition as of a date January 1, 1947?

A. No, sir; that was the last available basic data at that time.

SPECIAL MASTER: Now wait a minute. I don't understand the answer. He said that was the last basic data available at that time. What does he mean by basic data and available?

THE WITNESS: The basic data was available through 1946. The 1947 data had not become available yet.

Q. (By Mr. Tansey) And when you are speaking of basic data, would you just very briefly tell Your Honor what you are referring to?

A. Well, I'm talking about all of the records that are kept in the Basin that were used in the routing studies.

SPECIAL MASTER: Pardon me, I am still in doubt. The witness used the word "available." Available to whom?

THE WITNESS: Available to the Engineering Advisory Committee, to the Compact Commission.

Q. (By Mr. Tansey) Had the data been compiled and put together and published in any form that you could get at it at that time, for 1947?

A. No, sir.

MR. TANSEY: Does that cover what Your Honor wishes to get at?

SPECIAL MASTER: I just wanted a clear understanding of what the answer was, that's all.

Q. (By Mr. Tansey) Mr. Erickson, as a member of that Engineering Committee that was advising the Compact negotiators at that time, if there had been 1947 data and information available, would you have utilized it in your studies?

A. Yes, sir.

SPECIAL MASTER: Now wait a minute. There is nothing to show it was available. The answer to that question would be entirely conjectural and I am not interested in what the answer is. (Tr. 3008-3010).

New Mexico is not certain why the Master was not interested in whether more 1947 data would have been used by the engineer advisors to the compact negotiators had they been available. The answer to the question was not conjectural. The Report of the Engineering Advisory Committee was transmitted to the Pecos River Compact Commission on January 14, 1948. Writing for the Engineering Advisory Committee in January, 1948, Royce Tipton expressed the view of the other

committee members when he stated that "the 1947 condition represents *present* conditions on the river." (S.D. 109, pp. xxvi and 10) (emphasis added). Speaking for New Mexico on March 11, 1948, Commissioner Bliss stated his understanding that the 1947 condition shown in Table 1 of the engineer's report was intended to describe "present-day conditions." (Stip. Ex. 14, Minutes, PRCC, March 10 and 11, 1948, pp. 36-37). Mr. Erickson, who was a member of the engineering advisory committee in 1948, has testified that the 1947 condition was, in underlying principle, that stage of development on the river which included the year 1947. (Tr. 3008-3014). The other engineers on the engineering advisory committee in 1948 — Alfred Tamm, Robert L. Lowry, and E. V. Spence — agreed with Mr. Tipton and Mr. Erickson that the 1947 condition was a term intended to describe the stage of development which included 1947. *See*, "Synopsis," S.D. 109, pp. xxv-xxxiv. The record contradicts the Master's conclusion that "the engineers' intent must have been to relate the 1947 condition to that existing at the beginning, not the end, of 1947."⁶

Disregarding the understanding shared unanimously by the engineers and compact negotiators, the Master relies on the fact that the "Summary of Operations — 1947" ended with 1946. This fact means nothing except that the 1947 data were not available when the "Summary of Operations — 1947" was initially completed. At the second meeting after the adoption of the compact the commission promptly set out to:

Study and investigate the items recommended in the inflow-outflow manual directed toward a more accurate

6. The Pecos River Commission's findings of fact in 1961 and 1962 pursuant to Art. V(d) (5) and (6), as well as the actions of the engineer advisors and commissioners between 1949 and 1962, also constitute a clear administrative construction that the 1947 condition stage of development included 1947.

determination of inflow-outflow relationships. (and to) Determine more accurately the '1947 Condition' as defined in the Compact:

- (a) Obtain aerial photos of river bottom lands.
 - (b) Delineation of areas involving non-beneficial consumption of water.
 - (c) The assembly and analysis of all pertinent hydrologic data available.
- (Stip. Ex. 4, Minutes, PRC, December 9 and 10, 1949, pp. 3, 4).

The purpose of the aerial photography was "to pinpoint more accurately the conditions on the river in 1947." (Tr. 3011). It was understood by the negotiators and the engineers that the Report of the Engineering Advisory Committee was to be supplemented by additional data. *Cf.*, Art. VI(a). When asked whether 1947 data would have been utilized in the 1947 condition routing study had they been available, Mr. Erickson responded affirmatively. The Master stated that he was not interested in the answer to the question because "(t)here is nothing to show it was available." (Tr. 3010).

The understanding of all persons involved was that the 1947 condition included development through 1947. *See*, New Mexico's Objections to the Report of the Special Master on Issues Raised by Paragraphs 4(a), (b), and (c) of the Pre-Trial Order, April 6, 1979, pp. 4-8. In explaining the compact in December 1948, Mr. Tipton stated that the "'1947 condition' relates to a condition on the stream and does not relate to the water supply that occurred in the year 1947." He went on to explain that the condition on the stream was the condition "in 1947." (S.D. 109, p. 113). Despite the fact that the compact was adopted as explained, the Master has described such references as "loose" or somehow wanting in precision. We fail to discern any looseness and instead would charge the engineers

and negotiators with no more precision than is afforded by common usage. Their ordinary expressions comport with the historic facts.

The closest thing to evidence in support of the Master's supposition is the statement of counsel for Texas in objecting to New Mexico's tender of evidence:

MR. CAROOM: Your Honor, we certainly object to reopening the record to receive this evidence. As we stated in our letter, there is abundant evidence in the record. There were two weeks of testimony on the 1947 condition, and much of it, although not directed specifically at the precise date in 1947, is very relevant to the Court's determination and supports it. I can see no reason whatsoever to open the record now to allow this evidence in. (Tr. 3005).

The purpose of that testimony was to establish the meaning of the term "1947 condition" and to establish whether it is the "... situation of physical circumstances existing in the river basin in 1947. . . ." [Pre-Trial Order 4(a) (emphasis added)]. The fact that there were two weeks of testimony on the 1947 condition is dispositive insofar as the cutoff date is concerned. Had the cutoff date been an issue it should have been addressed in that testimony.

While a Master's conclusions of law are entitled to careful consideration, they have no presumptive effect. 5A J. Moore, *Federal Practice*, par. 53.12 (2d ed. 1979). With respect to findings of fact, the applicable federal rule provides that "the court shall accept the master's findings of fact unless clearly erroneous." [Fed. R. Civ. P. 53(e) (2)]. Here, however, the Master's determination respecting the 1947 condition cutoff date is not a finding involving disputed testimony and the weighing of evidence — it is mere supposition of fact. Accordingly, the ordinary presumption in favor of a Master's finding

is not applicable. *See, generally*, 5A J. Moore, *Federal Practice*, par. 53.12[4] (2d ed. 1979). Where a Master's finding is nothing more than an inference or supposition, the reasonableness of which can be as readily determined by the Court as by him, his "finding" carries no presumptive weight. *Kycoga Land Co. v. Kentucky River Coal Corp.*, 110 F.2d 894, 896 (6th Cir. 1940), *cert. denied*, 312 U.S. 688 (1941).

The fact of the matter is that Texas received a windfall in the form of the Master's supposition. Despite Texas's statement that there is ample evidence to support the Master, there is none. In this regard, we invite the Court to carefully scrutinize Texas's reply to this Brief. We doubt that Texas will be able to profitably avail itself of the opportunity to identify the evidence she claims exists. For the five reasons we've discussed, the record clearly establishes that the Special Master was wrong when he took it upon himself to exclude the development that occurred during 1947 from the 1947 condition stage of development. The additional evidence tendered by New Mexico and wrongfully rejected by the Master would have further supported the fact that 1947 development was a part of the 1947 condition.

POINT II: ARTICLE III(a), WHICH APPORTIONS TO TEXAS THE WATER WHICH IS EQUIVALENT TO THAT WHICH WAS BEING RECEIVED BY TEXAS UNDER THE 1947 CONDITION, DOES NOT MAKE NEW MEXICO LIABLE FOR BASE FLOW DEPLETION CAUSED BY GROUND WATER PUMPING.

The Master has pointed out that "(a)lthough hidden in a mass of semantics and mathematics, the heart of this controversy is the pumping of ground water in New Mexico." (Report,

Sept. 7, 1979, p. 44). Part of the problem relates to the way in which the issues were delineated in the Pre-Trial Order of October 31, 1978. There are two issues of controlling importance. One of them is listed as item 4(a) in the Pre-Trial Order, namely, whether the numerical description of the 1947 condition depicted in Plate No. 2 of the initial engineering studies is intrinsically the basis of the compact or whether it is an attempt to describe a real situation. The other is indeed buried in semantic and mathematic sophistry. That question is: Is New Mexico entitled to make the base inflow depletions that would result from the 1947 condition stage of development but which were then not manifest in the surface flow of the river?⁷

Comprehending the issue is difficult. During the final months of compact negotiations the dispute focused upon two hydrologic facts: 1) that because of the delayed effects of ground water pumping already established in 1947 on the regimen of the river, the base inflow to the river would progressively diminish until fully depleted, assuming no other hydrological change, and 2) that phreatophyte encroachment had caused substantial non-beneficial consumption of water. In discussing the problem on November 8, 1948, less than a month prior to reaching agreement, Mr. Tipton reported to the negotiators that it would be physically impossible to provide the anticipated safe yield of 165,000 acre-feet under the 1947 condition because "if nothing were done to bypass the salt cedars . . . and if the present pumping in the Artesia-Roswell area continued at the present rate, the yield . . . would gradually be reduced to 135,000 acre-feet. (S.D. 109, p. 82). The full

7. The "base inflow" is the natural ground water discharge of the artesian and shallow aquifers in the Acme to Artesia reach of the river.

engineering advisory committee reported the problem as follows:

The elimination or the bypassing of the salt cedars at the head of McMillan Reservoir and the abandonment of the use of that reservoir for the regulation of water for the Carlsbad project, under present conditions, will increase the dependable water supply for the basin by an average of 39,000 acre-feet per year. This benefit will be gradually decreased with the increasing effect on the base inflow to the river of the present pumping of the shallow ground water, if that pumping continues at its present rate. It is probable when the full effect of the pumping is felt some 40 or 50 years from the present, the increased depletion will not completely offset the 39,000 acre-feet of mean annual benefit. (S.D. 109, p. xxxiii).

By the time the negotiating commission met in Santa Fe on December 3, 1948, an agreement had been reached and the compact had been drafted. Because of Mr. Tipton's expertise, as well as the fact that he was the principal protagonist in obtaining the agreement, he was "asked to discuss the various articles to bring in the background, to show intent, and to provide a complete explanation of any matters about which there might be some question." (S.D. 109, p. 111). Ultimately, the compact was adopted as explained by Mr. Tipton. (S.D. 109, p. 129). In explaining Art. III(a), Mr. Tipton explained that New Mexico retained the right to continued ground water pumping:

There are three types of water that are apportioned. One is water which is equivalent to that which was being received by Texas under the '1947 condition.' And on the other side of the picture, by implication, there is apportioned to New Mexico that which she

was *using* under the '1947 condition.'⁸ (S.D. 109, p. 115). (emphasis supplied).

In explaining Article II(b) of the compact, Mr. Tipton stated:

So, as used herein, the definition "Pecos River Basin" means all of the contributing drainage area of the Pecos River and its tributaries above its mouth near Langtry, Texas. That means all of the area which contributes surface water to the stream or its tributaries, and all of the area which contributes ground-water accretions to the stream. In other words, the Basin includes all contributing drainage areas, both from surface and ground-water sources. There are not included those closed basin areas which contribute no water to the Pecos River. (S.D. 109, p. 112).

In other words, the ground waters of the Roswell ground water basin are a part of the supply apportioned by the compact.

In explaining Article II(g), Mr. Tipton stated:

I don't believe much explanation is needed of item '(g).' I will give a short one in order that there shall not be confusion. '1947 condition' relates to a condition on the stream and does not relate to the water supply that occurred in the year 1947. There may be some confusion about that. There were certain conditions that existed on the river, such as the diversion requirements of the Carlsbad project, which the engineering advisory committee assumed; the salt cedar consumption; the reservoir capacities that existed in

8. The Master advises the Court that "the word 'using' presents problems. The compact refers to depletions, not uses." (Report, Sept. 7, 1979, p. 21). As we will point out, no problem is presented if the article is fully comprehended.

1947; the operation of the Fort Sumner project up to 6,500 acres; *and the operation of all other projects on the stream as they actually existed in 1947.* It must be understood that the term '1947 condition' relates to the condition described in the report and does not relate to the water supply that occurred in the year 1947. (S.D. 109, p. 113) (emphasis supplied).

According to this explanation the 1947 condition includes the ground water uses established in 1947 or earlier.

In explaining Article III of the compact, Mr. Tipton stated:

Mr. Chairman, this is an exceedingly important article because it is the apportionment article. There are three types of water that are apportioned. One is the water which is equivalent to that which was being received by Texas under the '1947 condition.' And on the other side of the picture, by implication, there is apportioned to New Mexico that which she was *using* under the '1947 condition.' There is apportioned salvaged water and there is apportioned unappropriated floodwater. (S.D. 109, p. 115) (emphasis supplied).

There was apportioned to New Mexico the ground water uses that had been developed in 1947 or earlier even though the depletion associated with those uses had not yet been fully reflected in river flows by the end of 1947.

There is some confusion respecting the Master's treatment of the issue. The Master first reached his conclusion that the 1947 condition was reality, *i.e.*, the contemporaneous conditions on the river, in Report of Special Master on Issues Raised by Paragraphs 4(a), (b), and (c) of the Pre-Trial Order, February 2, 1979, p. 48. Both states were given the opportunity to object. New Mexico did not object. Texas requested that an exception be added to the Master's conclusion:

The 1947 Condition is that situation in the Pecos River Basin which produced in New Mexico the man-made depletions resulting from the stage of development existing at the beginning of the year 1947 and from the augmented Fort Sumner and Carlsbad acreage, *with the groundwater contribution to the Pecos River depleted to the extent existing at the beginning of 1947.* (Texas' Objections and Exceptions to the Report of Special Master on Issues Raised by Paragraphs 4(a), (b), and (c) of the Pre-Trial Order, April 6, 1979).

Insofar as acreage served by ground water pumping was concerned, Texas wanted the Master to express the view that the 1947 condition stage of development was not that at the beginning of the year 1947, but instead was much earlier; in other words, Texas urged that the Master should limit New Mexico to the depletion of base inflow that was already manifest in the river in 1947 rather than the depletion of that inflow which would ultimately result from the stage of ground water development that existed in 1947. Without the proposed exception it appeared to Texas that the 1947 condition stage of development would have included the ultimate effects of the contemporaneous ground water development. This exception, which would reverse the literal meaning of the conclusion, was rejected by the Master.

On April 24, 1979, oral argument was heard on the states' objections to the Master's February 2nd report. During the course of the argument some question was raised with respect to whether the Master intended in his conclusion on the 1947 condition to answer the question of liability for base flow diminution caused by the 1947 condition ground water pumping. Texas stated that the Master's ruling failed to give the states "concrete enough guidance" on the issue. (Tr. 2992). The first exchange between the Master and counsel seemed to resolve the question in New Mexico's favor:

MR. CAROOM: I think the report needs to say clearly that a depletion of the groundwater contribution to the river resulting from pumping established prior to 1947, if it causes a departure at state line from the amount required by the 1947 condition, will be chargeable against New Mexico.

SPECIAL MASTER: I am not going to say that, Mr. Caroom. As far as I am concerned, the word 'depletion,' as used in the Compact, includes all depletion, either surface or subsurface. (Tr. 2992).

A subsequent exchange appeared to resolve the issue in favor of Texas:

MR. CAROOM: All Right. Maybe this will explain the question or explain my concern. I don't know whether the Court is referring to a depletion of the groundwater reservoir or —

SPECIAL MASTER: All right. It is the depletion of the stateline flow. The Compact says not deplete the flow, the stateline flow. (Tr. 2993).

Confused by the Master's comments, New Mexico asked:

Is New Mexico entitled to the depletions manifest on the river in 1947 as a result of groundwater pumping, or depletions that would result from that stage of development existing in 1947? (Tr. 2998).

In response, the following colloquy took place:

SPECIAL MASTER: As long as it doesn't increase the depletions below what they were at that time, you comply with the Compact.

We get into too much semantics on this all the way through. The one reason you do it is because of the way this Compact is written. The Compact says you

shall not deplete, and I am trying my best to stay with the language of this Compact. It doesn't say that you shall contribute. As I told Mr. Tansey, it doesn't make any difference where the water comes from, as long as you do not deplete below what you did in 1947 you haven't violated the Compact.

MR. SIMMS: If Your Honor is saying New Mexico cannot deplete below what was in 1947 manifest in the river, it seems to me that stating that, instead of stating that we cannot deplete what would result from the '47 stage of development, is to roll back history in New Mexico: it is to say the New Mexico Legislature ratified a compact that wiped out the economy of southwestern, or southeastern New Mexico. The difference between January 1st, 1947, and the end of the year is another 10,000 acres. You are taking away from New Mexico what the Legislature never would have taken away. I find that utterly impossible to believe, if that is your decision. (Tr. 2998).

* * *

Your Honor, Royce Tipton, who guided these negotiations, told the negotiators at the point in time when they were touching this issue, that the New Mexico Legislature would never ratify such a Compact. In his mind, what was ultimately produced and agreed upon by the negotiators and later ratified by the New Mexico Legislature, was not what Your Honor is now saying it is. I don't know what says it clearer in the record.

SPECIAL MASTER: You may be right. I have been wrong lots of times. All I can do is my best. But let me say one thing, Mr. Simms, it is completely beyond my realm of comprehension as to why New Mexico and Texas did not make some legislative history when they had this Compact before the legislatures for ratification.

You didn't do that. I don't know how the States were operating then. It seems inconceivable to me that the Inflow-Outflow Manual would not at least have been put in final form a month or so after the Compact was signed. That's beyond my understanding. All I can do is the best I can on the way you have got it, and your Compact is written that New Mexico shall not deplete. (Tr. 2999-3000).

New Mexico left the hearings with the unsettled understanding that the Master's conclusion may have been intended to state Texas's position on the issue even though it literally stated New Mexico's. Assuming that to be the case we would object for the following reasons: 1) the Master's recitation of negotiating history does not lay out a sequence of facts from which it is possible to reason to such a conclusion; 2) when properly understood, Art. III(a) resolves the question of base inflow diminution through its reliance on the offsetting water salvage mandated by Arts. I and IV(a); 3) the New Mexico Legislature would not have ratified such a compact; and 4) in view of the lack of legislative history respecting the compact, the Master erred in rejecting New Mexico's evidence on intent.

Negotiating History

The Master's recitation of facts appears at some points to follow Texas's argument. *See generally*, Texas's Brief on the 1947 Condition, pp. 4-9. Initially, Texas quoted New Mexico's negotiator, John Bliss, to point out that he recognized a difference between the 1947 condition in the engineering report and the 1947 condition he insisted upon protecting:

The suggestions herein contained are based on the premise that allocations of Pecos River water between the states of New Mexico and Texas will be in perpetuity

and that in so doing, the commission must protect all existing beneficial uses insofar as possible on the basis of conditions as we find them today. By today's conditions, New Mexico does not mean the '1947' condition shown in Table I of the engineers' report, inasmuch as it is evident that the 1947 water supply will be decreased (other things being equal) by current depletions in the Roswell ground-water basin, the effect of which will not be reflected in the base flow of the river for years to come.

Accordingly, it is suggested that the proper basis for allocating the water is to provide for deliveries by New Mexico based upon the available supply in accordance with present-day conditions as above defined, providing that all future changes in flow not caused by changed beneficial use shall be charged or credited to the two states on an equitable basis to be worked out. (Stip. Ex. 14, Minutes, PRCC, March 10 and 11, 1948, pp. 36-37).

Further studies were made, including a routing study depicting contemporary conditions with the base flow depleted, designated the 1947-A condition. Texas then noted its continued insistence that New Mexico must relinquish her right to decrease the base flow — the hydrologic consequence of an agricultural economy that was largely established by 1937. Mr. Miller, the Texas negotiator, stated: "New Mexico must be responsible for and assume the burden for the taking of underground water that affects the base flow of the stream in question." (S.D. 109, p. 96).

Continuing the argument in her brief on the 1947 condition, Texas stated, in pertinent part, the first "principle" of New Mexico's proposal:

New Mexico shall agree not to deplete by man's activities, the flow of the Pecos River at the New Mexico-Texas state line below an amount which would give to

Texas the quantity of water equivalent of the 1947 condition as reported by the engineering advisory committee in its report of January 1948 and supplements thereto, adopted November 11, 1948, except as modified by paragraph 3 hereof. (S.D. 109, p. 97).

In summary Texas urged that that was that, suggesting that New Mexico had inexplicably given up the agricultural economy of the southeastern quarter of the state because Mr. Bliss had seemingly predicated the first principle upon the same 1947 condition that he had referred to a few months earlier as being different than the 1947 condition he sought to protect. Apparently the Master concluded that the drafting committee wrote the compact on the basis of this sequence of events as related by Texas, and it was approved and adopted.

This explanation of the ultimate resolution of the base flow issue does not unfold a compromise, but simply recites Texas's November 11, 1948 insistence upon the continuance of 1947 ground water depletions, and then interprets New Mexico's nine point proposal of principles on November 13, 1948, as a submission to Texas's position, notwithstanding the fact that the nine point proposal expressed the same position as that stated by Mr. Bliss on March 11, 1948. (Report of Special Master on Obligation of New Mexico to Texas Under Pecos River Compact, August 13, 1979, pp. 20-26). The Master concludes that "apparently everyone was satisfied," but as his expression suggests, the explanation does not make the sequence of events intelligible; in other words, the explanation explains nothing.

The reason that this recitation of events is not explicative of liability for base flow depletion will be discussed below. A reading of the transcript of the March negotiations shows that Mr. Bliss retained the right to New Mexico's established ground water depletions. On March 11th Mr. Bliss stated that it was "apparent . . . that when we talk about present day

conditions, we are not fully reflecting the effect of existing developments on the river." (Stip. Ex. 14, Minutes, PRCC, March 10 and 11, 1948, p. 36). With that in mind, Mr. Bliss proposed that no change in flow should be chargeable against New Mexico unless caused by increases in beneficial uses. (*Id.* at 36-37).

In response to Texas's belief that Mr. Bliss's proposal was unclear, Mr. Tipton explained:

As I understand Mr. Bliss' statement, he does not conceive present day conditions as those which are characterized in the engineers' advisory report as 1947 conditions. He visualizes present day conditions as the 1947 conditions, with the base inflow as it will actually be depleted when the full effect of the shallow ground water pumping in the Roswell-Artesia area is reflected in the flow of the river. *Mr. Bliss states, therefore, that his state is willing to freeze conditions on the river, so far as New Mexico uses are concerned . . .*⁹ (*Id.* at 42) (emphasis added).

Notwithstanding Tipton's explanation, Texas representatives repeated their view that Bliss's proposal was unclear. In response Bliss stated:

I believe that what we would agree to would be a formula or agreement which would reflect present day conditions, *substantially shown as 1947 conditions in Table I of the report*, and then add additional provisions to that base formula which would account for the changes which we contemplated in our suggestion. (*Id.* at 46) (emphasis added).

9. Note carefully Tipton's use of the word "uses" in his explanation of the proposal. The same terminology is used in his explanation of Art. III(a).

The first principle in New Mexico's proposal of November 13th does precisely that, *i.e.*, it utilized the 1947 condition in the engineering reports, qualified, as explained by Tipton, by the right to existing uses that would cause future base inflow diminution. See, Tipton's explanation of Art. III(a), S.D. 109, p. 115.¹⁰

In another exchange of thoughts in this regard, Mr. Lowry queried:

Do I understand you, then, Mr. Bliss, to say that you would be willing to start out with the proposal listed as '1947 Conditions' in the report, and from there go ahead to some equitable division of such water as might be salvaged under a joint proposal between the states. . . .? (Stip. Ex. 14, Minutes, PRCC, March 10 and 11, 1948, p. 49).

10. In discussing Tipton's explanation of Art. III(a) in which he said "... there is apportioned to New Mexico that which she was using under the '1947 condition'," the Master notes that the word "using" presents problems. There is no problem, however, if the word is read in context, as it must be, to mean the depletions of the tributary ground water sources of the Pecos River Basin associated with the *uses* existing in 1947. In this connection attention is invited to the consistency of Tipton's use of the word when read in context with the Master's statement of New Mexico's position on pp. 54-55 of his August 13, 1979 report, as well as Tipton's use of the word in explaining Mr. Bliss's proposal on March 11, 1948.

Endorsing Texas's criticism, the Master appears annoyed by New Mexico's "use theory," which, he states, he has repeatedly rejected. (Report, Sept. 7, 1979, p. 50). The facts, however, provide unequivocal support of the concept of freezing uses on the river as of 1947, as does the administration of the compact through 1970, when the administrative work was unilaterally repudiated by Texas. As will be thoroughly discussed in New Mexico's reply to Texas's objections, the Master ignores the administrative history as well.

Mr. Bliss responded by stating: "That is correct, Mr. Lowry, with one exception. We feel that the delayed effect of shallow water pumping will have to be taken into account. . . ." (*Id.*). Mr. Tipton also took it upon himself to explain the basis of the agreement:

Going back to New Mexico's proposal — the base schedule could reflect the so-called '1947 Condition.' That base schedule then, would be subject to modification in either direction. If no salvage of water were made by reducing non-beneficial consumption, the base schedule would be modified by reducing quantities of water to be delivered to Texas to reflect increased depletions in stream flow by present pumping of the shallow ground water in what has been termed the Roswell-Artesia Area. The base schedule reflecting the 1947 condition would be subject to modification in the other direction, which would result in a schedule which would cause the delivery of greater quantities of water to Texas to reflect an equitable apportionment of water which would be salvaged under that condition by the by-passing of the salt cedars at the head of Lake McMillan, or by other means. (*Id.* at 49-50).

As defined in the compact, the Pecos River is more than its surface manifestation flowing within a definable bed and banks. *See*, Art. II(a) and (b). The river consists of the water flowing on the surface, and the tributary ground waters. *See*, Tipton's explanation, S.D. 109, p. 112. The 1947 condition relates to a stage of development on the entire system, not simply to the surface flow. (*Id.* at 113). As explained by Mr. Bliss and Mr. Tipton — and understood by Mr. Lowry — the "freeze on the river" did not include a "freeze" on the projected further depletion of stream flow by continuation of already established depletions of the tributary ground waters of the Pecos River Basin. It did include a freeze on ground water uses at the 1947

level, and it was in this way, as the Master has noted, that "New Mexico accepted a limitation on its depletions."

Art. III(a) is Expressly Indifferent to the Question of Liability for Base Inflow Diminution.

The Master has stated:

The Compact negotiators rejected the engineers' routing study 1947-A, which was predicated on "base flow fully depleted," see item 8 in table appearing on p. 95, S.D. 109. Instead, they acted on the 1947 routing study, Appendix A. The Master again rejects the New Mexico use theory. (Report, Sept. 7, 1979, p. 50).

Apparently, it is the Master's conclusion that the rejection of 1947-A, which routed water through the 1947 condition with the base flow fully depleted, was tantamount to a rejection of New Mexico's persistence that she be able to continue the ground water depletions established by 1947. If this view were correct, however, the word "equivalent" would not be needed and would not appear in Art. III(a). Instead, it would read: "... New Mexico shall not deplete by man's activities the flow of the Pecos River at the New Mexico-Texas state line below the quantity of water available to Texas under the 1947 condition." The fundamental fact that the Master does not comprehend is that the use of the word "equivalent" facilitates the exchange of water made available by salvage for water depleted by base inflow decline.

If the compact had been based upon the 1947-A study, its basic provision — the built-in flexibility enabling a substitution of the *source* of supply of the water received under the 1947 condition — could not have been incorporated into the compact. The Master's understanding of Art. III(a) fails to

comprehend the essence of the agreement. The most logical study to examine the basis agreed upon would have been one with salt cedars eliminated and base inflow fully depleted. This condition with respect to state line flow is precisely that reflected by "Summary of Operations - 1947." That routing study used the base inflow as it was in 1947 and the non-beneficial uses as they existed in 1947. Because the potential salvage, as measured at Avalon, estimated by the engineer advisors was virtually equal to the engineers' estimate of the ultimate decline in base inflow, as measured at Avalon, the "Summary of Operations - 1947" reflects the state line flow that would have resulted with the potential salvage effected and the 1947 base inflow completely depleted.

It is important to note that in all of the engineering analyses of the Pecos River the base inflow to the Acme-Artesia reach is not treated as a part of the index inflow. That is, Plate No. 2 as it appears in S.D. 109 or in the Review of Basic Data would reflect any diminution of base inflow resulting from ground water uses established in 1947 or earlier as an underdelivery, all other things remaining unchanged. It should not be inferred from this that a departure from the relationship of Plate No. 2 resulting from such a diminution is chargeable against New Mexico as a depletion of the stateline flow as a result of a change in depletion by man's activities. As a practical matter, Plate No. 2 could not have been drawn to reflect a progressive change in base inflow. Had it been drawn to reflect conditions with the base inflow entirely depleted, as it could have been, New Mexico would have been able to sharply increase uses after 1947 and then gradually reduce those uses as delayed effects of 1947 ground water pumping were reflected in the base inflow and Texas's interest would have been detrimentally affected more as compared to simply recognizing New Mexico's entitlement to all surface and ground water uses established in 1947 or earlier.

Texas sought an agreement based upon Proposed A, *i.e.*, the river operation "assuming the salt cedars to [have been] bypassed and all other conditions to remain as of 1947." (S.D. 109, p. 10). New Mexico could not agree because "the condition presupposes. . . the successful elimination. . . of the non-beneficial uses of water by the salt cedars. . .," and because "the proposal places the full obligation upon the State of New Mexico." (Stip. Ex. 14, Minutes, PRCC, March 10 and 11, 1948, p. 23). Mr. Bliss stated further that if. . . water is to be saved in the basin, Texas should participate in the saving; but if there is any question of maintaining that condition, or, if the river channel should deteriorate so that condition cannot be maintained through the years, then Texas should share in the reduction resulting therefrom.

It was apparent that both states were in agreement that an apportionment based on the concept of the 1947 condition adjusted by water salvaged would be satisfactory, but they could not state the concept with enough specificity. Texas kept insisting on a fixed quantity of delivery at the state line, but Mr. Bliss pointed out that "it is impossible at the present time to evaluate the deliveries at the state line which could be made under this proposal." According to Mr. Bliss:

The amount of such deliveries, as I see it, would be a variable quantity depending on two factors. One would be the increased effect of the shallow water pumping in the Roswell basin. The other would be the variable effect of non-beneficial uses of water in the basin. As New Mexico conceives it, the salt cedar problem can be substantially corrected by the proposed works above Lake McMillan. However, it is conceivable that such works will not solve the entire problem in that salt cedars may, and probably will, encroach on other sections of the stream, both in Texas and in New Mexico and we feel that it is a joint problem in which the two

states are mutually interested and which is to their mutual advantage to solve. I will confess that at the present time, I can not visualize just what formula or type of formula could be agreed upon which would reflect the proposal we have made. I think that we could probably arrive at a schedule or formula which would reflect present day conditions but a provision would have to be made to vary such a formula to account for works to be constructed in the future or for changes in non-beneficial uses along the stream which it would be the joint obligation of the two states, presumably through the Federal Government, to correct. (*Id.* at 45).

As envisaged by Mr. Bliss, the basic apportionment would be based on the 1947 condition, but subject to modification in two directions, one of which would have resulted in a greater stream flow depletion under the same stage of development because of base inflow diminution, and the other of which would have resulted in a larger state line yield because of the elimination of non-beneficial depletions. What Mr. Bliss could not visualize was "just what formula. . . could be agreed upon which would reflect the proposal we have made." (*Id.*). It is evident that the negotiators subsequently realized that the "Summary of Operations - 1947" expressed the formula that Mr. Bliss was seeking. The formula was implemented by recognizing in drafting Art. III(a) that projected water salvage would give both states a water supply equivalent to that enjoyed before the suggested diminution of base inflow.

Texas was still not satisfied with Mr. Bliss's explanation; she needed a more "definite statement. . . ." (*Id.* at 46). Attempting to settle any remaining questions, Mr. Tipton noted that he thought both states were attempting to agree on the same thing, but stating it differently. He explained the concept as follows:

... the base schedule could reflect the so-called '1947 Condition.' That base schedule then, would be subject to modification in either direction. If no salvage of water were made by reducing non-beneficial consumption, the base schedule would be modified by reducing quantities of water to be delivered to Texas to reflect increased depletions in stream flow by present pumping of the shallow ground water in what has been termed the Roswell-Artesia Area. The base schedule reflecting the 1947 condition would be subject to modification in the other direction, which would result in a schedule which would cause the delivery of greater quantities of water to Texas to reflect an equitable apportionment of water which would be salvaged under that condition by the bypassing of the salt cedars. . . (S.D. 109, pp. 49-50).

The negotiators were aware that the compact was to be an agreement in perpetuity, but the basic condition upon which the states could agree was subject to potential, conflicting influences. The question was how to articulate an apportionment that could change in either direction. Toward the close of the March meeting, Mr. Bliss stated:

I feel that either the engineering committee or New Mexico will have to attempt an evaluation of the negative effects contemplated by our suggestion. . . . If it is agreeable to the commission, I suggest that the engineering committee attempt such an evaluation. (Stip. Ex. 14, Minutes, PRCC, March 10 and 11, 1948, pp. 60-61).

Judge Moise, the New Mexico legal advisor, quickly added: "Would you add to that an outline of a formula, not necessarily setting forth the amounts, but a method by which that effect could be taken into account? "

The commission's negotiations in March, 1948, resulted in three instructions to the Engineering Advisory Committee: 1) that they analyze the offers of each state, 2) that they estimate the effect of ground water pumping on the base flow of the river, and 3) that they consider any other possible basis of an apportionment. (Stip. Ex. 14, Minutes, PRCC, Nov. 8-13, 1948, pp. 11-12). The committee's conclusions were reported to the commission in the December 3, 1948 Supplement to the Report of January, 1948 by the Engineering Advisory Committee. (S.D. 109, p. 133). In presenting the supplemental report to the commission, Mr. Tipton observed that "the limits of the field for negotiating a compact" . . . had been "narrowed materially." (Stip. Ex. 14, Minutes, PRCC, Nov. 8-13, 1948, p. 20).

The illusory "formula" which would utilize the 1947 condition, but accommodate changes in both directions caused by base flow diminution on the one hand and water salvaged on the other, appears in Art. III(a) in the form of the word "equivalent." The negotiators were aware that Texas would not continue receiving the water she would have received under the 1947 condition because of the projected, gradual base flow diminution under that condition, *a condition which included the 1947 ground water pumping*. On the other hand, the negotiators anticipated that the *status quo* could be maintained in both states if water being non-beneficially consumed were salvaged, thus offsetting base flow diminution. Accordingly, the water that Texas was to receive pursuant to the agreement embodied in Art. III(a) was water "equivalent to that available to Texas under the 1947 condition" and, conversely, "there is apportioned to New Mexico that which she was using under the '1947 condition'." (S.D. 109, p. 115). In light of this agreement, the 1947 ground water uses *must* have been a part of the 1947 condition. Otherwise, the language facilitating a substitution of source of supply would have been unnecessary,

and the negotiators would have been wasting their time looking for a way in which to express the dynamic nature of the agreement.

Art. III(a) provides that "New Mexico *shall not deplete by man's activities* the flow of the Pecos River. . . below an amount. . . equivalent to that available. . . under the 1947 condition." The ground water uses existing in 1947 resulted, of course, in depletions by man's activities. In agreeing to freeze conditions upstream, New Mexico agreed to cause no more depletion to the *system* than was already being caused, that is, to initiate no *new* activities of man that would deplete system waters. Accordingly, the agreement not to deplete by man's activities complements the retention by New Mexico of the right to continue the 1947 ground water uses, as evidenced by the "formula" designed to facilitate the substitution of water diminished by base inflow declines with water salvaged.

While not answered by the terms of Art. III(a), the question of liability for base flow diminution is answered by reference to the compact's water salvage provisions. In her objections to the Master's report of August 13, 1979, Texas argued that "it was the intent of the New Mexico negotiators to make up for base flow declines with salvaged water." (Texas's Objections, p. 4). New Mexico agrees, with the understanding that each state anticipated that water would have to be salvaged to continue her supply. Texas maintains that New Mexico shouldered the responsibility alone. The Master, it would appear, agrees with New Mexico on this point, notwithstanding his apparent decision to eliminate the ground water uses from the 1947 condition stage of development. (Report, Sept. 7, 1979, p. 26). Both the compact provisions regarding water salvage and the history of lack of accord over the meaning of Art. III(c), support New Mexico's understanding. When apprised of the significance of water salvage in this regard, the Master

responded tersely that "(w)ater salvage has nothing to do with the 1947 condition." (Report, Sept. 7, 1979, p. 50).

In pertinent part, Art. IV of the compact reads:

(a) New Mexico and Texas shall cooperate to support legislation for the authorization and construction of projects to eliminate nonbeneficial consumption of water.

(b) New Mexico and Texas shall cooperate with agencies of the United States to devise and effectuate means of alleviating the salinity condition of the Pecos River.

(c) New Mexico and Texas each may:

(i) Construct additional reservoir capacity to replace reservoir capacity made unusable by any cause.

(ii) Construct additional reservoir capacity for the utilization of water salvaged and unappropriated floodwaters apportioned by this Compact to such state.

(iii) Construct additional reservoir capacity for the purpose of making more efficient use of water apportioned by this Compact to such state.

(d) Neither New Mexico nor Texas will oppose the construction of any facilities permitted by this Compact, and New Mexico and Texas will cooperate to obtain the construction of facilities that will be of joint benefit to the two states.

With respect to the elimination of non-beneficial use and the salvage of water, the emphasis is on cooperation; salvage was conceived to be a joint responsibility requiring a joint program of action. In explaining the article, Mr. Tipton stated:

Mr. Chairman, subparagraph (a) relates to the cooperation of the two States to support legislation and

authorization for the construction of projects to eliminate nonbeneficial consumption of water. *I believe that is an exceedingly important provision of the compact. The compact will permit that being done. The compact makes it mandatory to do that.* There is a fairly large quantity of water that can be made usable by the construction of the proper works. (S.D. 109, p. 120).

Not only did Tipton view salvage as a joint responsibility, he understood it as being made "mandatory" by the compact in light of the fact that the compact wouldn't work without salvage. He made the same comment a number of years later in an article prepared from a talk given in Santa Fe to the Governor and members of the legislature:

About the year 1927 the pumping of shallow ground water in the area extending from Roswell to Artesia commenced. This development increased fairly rapidly until 1937 when the State Engineer of New Mexico closed the basin to further development, thereby preventing the use of additional shallow ground water. However, by the time the Compact was negotiated the withdrawal of the (shallow ground) water had decreased the base flow of the river by about 30 cubic feet per second. The Ground Water Division of the U.S. Geological Survey estimated that the full effect of the pumping as now controlled will not be felt for many years and that in spite of such control and the probable restoration of some of the flow to the river from the artesian area because of control within that area, there will be an additional depletion of inflow to the river.

When the Pecos River Compact Commission negotiated a compact, all of these matters were fully recognized. The following is quoted from Article IV of the Compact:

'(a) New Mexico and Texas shall cooperate to support legislation for the authorization and construction

of projects to eliminate nonbeneficial consumption of water.

'(b) New Mexico and Texas shall cooperate with agencies of the United States to devise and effectuate means of alleviating the salinity conditions of the Pecos River.'

These provisions indicate plainly that the Commission had in mind at the time it negotiated the compact an Action Program to take care of these two situations to the extent possible. *It was recognized that some of the water salvaged by reducing nonbeneficial consumption would be needed to offset the additional depletion caused by the shallow ground-water pumping.* (Tipton, R.J., "One or the Other, A Resume of Pecos River Problems," Hearing before the Subcommittee on Irrigation and Reclamation of the Committee on Interior Insular Affairs, United States Senate, 84th Cong., 2d Sess. on S. J. Res. 155, May 10, 1956, pp. 4-5) (emphasis added).

The water salvage provisions of the compact make it clear that the compact was remedial in nature and that a program of action to remedy the problem of non-beneficial consumption was contemplated to be jointly undertaken by the Pecos River Commission, which was created in Art. V of the compact. In the report of the Engineering Advisory Committee in 1955 entitled "Initial Development Water Salvage and Salinity Alleviation Action Programs — Pecos River Basin," the remedial action was described as follows:

When the Pecos River Compact Commission negotiated a compact, these matters and others were fully acknowledged. After years of negotiation a compact was signed in Santa Fe on December 3, 1948. The Congress of the United States gave its consent to the Pecos River Compact by Public Law 91, 81st Congress,

1st Session. The following is quoted from Article IV of the Compact:

'(a) New Mexico and Texas shall cooperate to support legislation for the authorization and construction of projects to eliminate nonbeneficial consumption of water.

'(b) New Mexico and Texas shall cooperate with agencies of the United States to devise and effectuate means of alleviating the salinity conditions of the Pecos River.'

These provisions indicate plainly that the Commission had in mind at the time it negotiated the compact a program to take care of these two situations to the extent possible.

An interstate administrative agency to be known as the Pecos River Commission was created in accordance with Article V of the compact. This commission has studied the problems of nonbeneficial water consumption and salt contamination.

(Hearing before the Subcommittee on Irrigation and Reclamation of the Committee on Interior and Insular Affairs, United States Senate, 84th Cong., 2d Sess., on S. J. Res. 155, May 10, 1956, p. 14).

In further testimony before the subcommittee on the problems of non-beneficial use and excess salinity, Mr. Tipton stated succinctly:

The compact commission in negotiating the compact recognized fully the problems which confronted the river. *The compact commission in drafting the compact obligated the commission to do something about it. (Id. at 9) (emphasis added).*

The water salvage provisions of the compact make it clear that the compact was remedial in nature and that *both* states

intended to offset the ultimate complete depletion of the base inflow resulting from the continued ground water withdrawals projected by the engineers by cooperative efforts to salvage ground water. The engineers had advised the negotiators that the estimated potential water salvage as measured at Avalon slightly exceeded the projected diminution of supply from base inflow as measured at Avalon. (S.D. 109, p. xxxiii, p. 138, and p. 141). The provisions addressing water salvage in Art. I, Art. III(a), and Art. IV(c) are based on this advice.

In New Mexico's objections August 31, 1979 to the Master's report of August 13, 1979, we attempted to explain New Mexico's position on the matter historically, along with Texas's refusal to cooperate, and the Master rejected it as having "nothing to do with the 1947 condition." (Report, Sept. 7, 1979, p. 59). We believe it is clear that the Master is wrong and that a decision on the question of apportionment of "water salvaged" is essential to a resolution of issue 4(a) of the Pre-Trial Order that will facilitate conduct of the remainder of the trial. New Mexico's position on the apportionment of water salvage was first stated at least as early as August 29, 1962, in S. E. Reynolds' letter to John J. Vandertulip, the chief engineer of the Texas Water Commission. (Tr. 1913-14). That position was again stated in Commissioner T. E. Lusk's May 1963 statement before the Senate Interior and Insular Affairs Committee on S. J. Res. 49, as follows:

In this regard it is the position of New Mexico that any water salvaged by reason of activities authorized by S. J. Res. 49 would not be subject to apportionment in accordance with Article III(c) unless the amount salvaged exceeds the total by which ground water pumpage already established in 1947 and increases in non-beneficial consumptive use have reduced the flow of the Pecos River since 1947. At whatever time and to whatever extent the amount salvaged under the provisions of the

legislation exceeds this total, Texas would receive in accordance with Article III(c) of the compact at least 43 per cent of this excess as spill and return flow from the works and irrigated lands of the Carlsbad Irrigation District or otherwise. [H.R. Rep. No. 1572, 88th Cong., 2d Sess. 33 (1964)].

Texas has neither agreed nor disagreed with this New Mexico position despite Mr. Tipton's efforts to obtain a response. (Stip. Ex. 14, Minutes, PRCC, Nov. 9, 1962, p. 258). At the proceedings in the conference of engineers with the Technical Assistant in October of 1978, the Texas engineers again neither agreed nor disagreed with the New Mexico position. (Tr. 2897).

In response to the Master's statement pointing out that New Mexico's 57 per cent of the projected water salvaged would not be sufficient to offset the effect of the ultimate complete depletion of base inflow on the flow at the state line (Report, August 13, 1979, p. 30), Texas argued:

While Article III(c) does allow New Mexico only 57 per cent of the salvaged water, Mr. Tipton's comments on salvaged water clearly indicate that New Mexico is entitled to use all the salvaged water that comes downstream, so long as 43 per cent reaches the state line (S.D. 109, pgs. 119 and 125). The ability to use Texas' salvaged water as it passes downstream assumes special importance when one recalls that the Carlsbad Irrigation District has a return flow of 47 per cent (T.R. 558-559). This circumstance would allow the District to divert 100 per cent of the salvaged water and still supply Texas its 43 per cent. (Texas's Objections, p. 5).

Texas's position fails to recognize the simple arithmetic of the matter. If New Mexico is obliged to deliver at the state line as return flow from the Carlsbad Project 47 per cent of the base inflow as measured at Avalon and is further obliged to deliver at the state line 43 per cent of water salvaged as measured at

Avalon, these obligations clearly cannot be met with New Mexico's 57 per cent of the water salvaged, even if the water salvaged as measured at Avalon is equal to the base inflow depletion as measured at Avalon as the engineers in 1947 predicted that it would be.¹¹

Satisfaction of the fundamental purpose of the compact "to make secure and protect development within the states" requires that none of the water salvaged up to the amount of the base inflow depletion occurring after 1947 as a result of the continuation of uses existing in 1947 be apportioned 57 per cent to New Mexico and 43 per cent to Texas. Only that portion of the water salvaged in excess of the base inflow depletion since 1947 would be apportioned 57 per cent to New Mexico and 43 per cent to Texas. If all water salvaged to offset the base inflow depletion were apportioned 57 per cent to New Mexico and 43 per cent to Texas, the supply available to New Mexico would be decreased as the base inflow declines are offset by water salvaged, while Texas's supply would be increased above the supply available to Texas under the 1947 condition. If the water salvaged is apportioned as New Mexico contends it should be, each state's supply would continue the same as before the post-1947 base inflow depletion in accordance with the stated purpose of the compact in Art. I.

11. If the 1947 condition base inflow as measured at Avalon were 39,000 acre feet, Texas would be entitled to 18,330 acre-feet of that amount ($39,000 \times .47 = 18,330$). If the base inflow were entirely depleted and salvage in the amount of 39,000 acre-feet as measured at Avalon had been effected, Texas additionally would be entitled to 16,770 acre-feet of that salvage ($39,000 \times .43 = 16,770$), for a total of 35,100 acre-feet. Thus, New Mexico would be required to deliver 16,770 acre-feet annually in addition to the amount Texas was receiving with the base inflow at the 1947 level.

Texas's arguments cited above might be construed as a contention that Texas is entitled to 47 per cent of the 1947 condition base inflow as measured at Avalon and in addition is entitled to 43 per cent of any water salvaged to offset that base inflow depletion as measured at Avalon. It would be as logical and reasonable for New Mexico to claim she is entitled to completely deplete the base inflow, as the engineers projected would happen under the 1947 condition, and in addition is entitled to 57 per cent of any water salvaged. New Mexico does not so claim. Such an apportionment would increase above the 1947 condition the supply available to New Mexico and decrease below that condition the supply available to Texas.

While the compact does not explicitly address the situation in which water salvage is not effected to offset the projected post-1947 base inflow depletion, there can be no question that it was contemplated that the supply in both states would suffer. Texas would lose the estimated 47 per cent of the base inflow as measured at Avalon that reached the state line before that depletion occurred. While New Mexico is entitled to continue operation of the works constituting the 1947 condition stage of development in New Mexico, she would not be able to increase storage capacity or change the source of supply of uses from surface water to ground water if such modifications would result in a depletion at the state line greater than would have resulted from continued operation of the works constituting the 1947 condition stage of development. Consequently, it must be expected that when the base inflow is completely depleted and water salvage has not been effected to offset that depletion, New Mexico's supply would be decreased by 53 per cent of the post-1947 base inflow depletion, assuming all other things would remain unchanged, as we must to intelligibly discuss the matter.

New Mexico submits that it is essential that in formulating a decision defining the 1947 condition the Court must recognize

the complementary nature of the provisions related to water salvage in Articles I, III(c), and IV(a). While in 17 years Texas has never disagreed with New Mexico's position on the apportionment of water salvage, neither has she agreed. A decision on the apportionment of water salvaged is essential to a useful resolution of the 4(a) issue. By refusing to recognize the complementary nature of the provisions of Art. III(a), which apportions the water equivalent to that which Texas would have received under the 1947 condition, and Articles I, III(c), and IV(a), the Master has made it impossible to understand the essence of the compact.

Legislative Approval

The compact was signed on December 3, 1948, approved by the New Mexico Interstate Stream Commission on January 10, 1949, and ratified by the New Mexico legislature on February 9, 1949, not because the base inflow issue was resolved by New Mexico relinquishing its ground water development, but because of the prospect of water salvage. If New Mexico had given up its ground water depletions, it is clear that the compact never would have been approved or ratified. In explaining the basis of the agreement on November 13, 1948, to the negotiating commission, Mr. Tipton said:

I believe that a compact could be written around the principles as presented. It is fairly obvious to me that one of the fundamental principles involved here, that of a guaranty by New Mexico not to deplete the flow of the river below essentially present conditions or, conversely, that there should be delivered at the State line that which Texas is receiving with some modification is a fair provision. I believe it is fair to both States. I don't believe New Mexico in good conscience could say we're going to deliver less than that. I don't believe Texas should require more because a compact could

not be ratified by New Mexico, I don't believe, under those conditions. (S.D. 109, p. 98).

Assuming the Master intended to make New Mexico alone liable for base flow declines in the absence of water salvaged, the net effect would be that the 1947 condition development in the Roswell Underground Water Basin, which is most of the development in New Mexico, would be the approximately 100,000 acres under irrigation in 1939 instead of the approximately 125,000 acres irrigated in 1947. Compounding the inequity of such a definition is the fact that the base inflow responds very slowly to changes in the rate of ground water withdrawals. To promptly restore the base inflow of the "1947 condition" as defined by the Master on April 24, 1979, would require a reduction in acreage to an amount far below that irrigated in 1939; it might be necessary to reduce the acreage to as little as the 56,000 acres irrigated in 1926.¹² Over a period

12. Article IX of the compact requires that in all instances New Mexico shall apply the principle of prior appropriation in maintaining flows at the state line. In general, surface water uses in New Mexico are the most senior, followed by the artesian ground water uses and then the shallow ground water uses. The base inflow responds most slowly to changes in shallow ground water withdrawals. Accordingly, virtually all of the shallow ground water use in New Mexico would have to be terminated before an early, substantial increase in state line flow could be realized by reducing artesian ground water and junior surface water uses. The Master's statement that "the source of flow is immaterial" is not correct. Furthermore, the statement that "the Compact says nothing about contributions to the stream from any source" is not correct. Priority of appropriation would necessarily arrange any required contribution.

In response to these facts the Master has stated:

The contention is that the impact of the Master's definition of the 1947 condition and of the quoted Compact provision will reduce the irrigated acreage in New Mexico. The record contains no evidence one way or the other on this point. As pointed out

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of several decades the irrigation might be restored to the 1939 level, but the economic disaster of the initial reduction would be little ameliorated by that restoration. Had New Mexico been required to maintain the 1947 condition precipitation-base inflow relationship upon the effective date of the compact, it would have been necessary forthwith to have reduced the irrigated acreage to an amount well below the 1939 level, but not to the extent that it would be necessary to promptly restore the relationship at this time.

The only testimony in the record that addresses the issue reiterates that the compact never would have been signed if New Mexico had to give up its ground water depletions. *See*, Deposition of Irwin S. Moise, November 2, 1976, p. 43; Deposition of John R. Erickson, November 23, 1976, p. 6; and Tr. 890. The Master, however, deemed it inadmissible.

New Mexico's Evidence of Intent

There are three ways in which the Court and the Master could have learned of the intent of the compact negotiators: 1) through documentary evidence or testimony on intent;

12. *Cont'd from page 81.*

in the Master's Report, the States rejected irrigated acreage as a method of apportionment. (Report, Sept. 7, 1979, p. 51).

It is not relevant that there is no evidence in the record illustrating the consequence of the Master's decision, though the facts are not controvertible. We simply wanted him to understand what he was doing and to realize that the New Mexico legislature never would have sanctioned the compact as he has orally construed it.

Further, it is not relevant that the states rejected irrigated acreage as a method of apportionment. They obviously did not reject the concept of routing annual supplies of water through a condition or set of circumstances on the river to evaluate bases of compacts that would protect irrigated acreage.

2) through the express language of the compact and its explanation by Mr. Tipton; and 3) through post-adoptive administrative construction. Given the apparent ambiguity of the compact provisions — at least the parties' opposing interpretations of those provisions — one would expect the Master to look to the first and third ways of ascertaining the facts. However, the Master rejected both modes of proof. Both provide unwavering support for New Mexico.

For reasons counsel for New Mexico do not understand, there is no record of any explanatory information provided to either the New Mexico or Texas legislatures when the compact was ratified, that is, no legislative history exists in support of either side. Consequently, New Mexico offered the testimony of John Bliss, New Mexico's representative to the negotiating commission, John Erickson, New Mexico's engineering advisor to the negotiators and a member of the Engineering Advisory Committee during compact administration, and Judge Irwin Moise, a retired New Mexico Supreme Court Justice who served as one of New Mexico's legal advisors during negotiations and the early years of the compact's administration. The Master rejected the testimony on the ground that "(t)he pertinent intent is not that of the negotiators but rather that of the legislatures of the respective states when they ratified the Compact and that of Congress when it gave the consent of the United States to the compact." (Report of the Special Master on His Decision and Supplemental Decision Regarding the Affirmative Defenses of New Mexico to the Complaint of Texas, July 6, 1977, p. 14).

At trial, however, Texas sought to introduce evidence of intent in the form of memoranda that ostensibly described "offers and counteroffers." New Mexico objected because the memoranda were hearsay, the authors were not subject to cross-examination, and more importantly, because the Master

had earlier ruled that no pre-compact evidence of intent would be admissible unless it was embodied in writing and communicated to the respective legislatures. *See*, Tr. 613-629. The Master, however, admitted Texas's evidence on the theory that it "does not go to intent but shows either an offer or counteroffer of the State of Texas before the execution and ratification of the Compact." (Tr. 626). The Master did admit that "(t)he line of demarcation between intent and offer and counteroffer is pretty thin." (Tr. 626).

New Mexico believes that the line is not only pretty thin, but arbitrarily unfair. The Master appears to rule that the intent of the compact provisions is to be determined by *legislative* intent, although Texas may present evidence of what offers or counteroffers were made, *i.e.*, evidence respecting the intent of a *contract*. As far as we can discern, the contents of the offers or counteroffers are relevant only to show the intent of the compact. The distinction, if it can be made this simply, seems logically untenable. The Master appears to want to have his cake as a "legislation theory" and also to eat it as a "contract theory." He erred in admitting Texas's evidence and rejecting New Mexico's.

CONCLUSION

The Master characterizes the fact that his oral construction of his conclusion on the 1947 condition would reduce irrigated acreage in New Mexico as a "contention," further explaining that "(t)he record contains no evidence one way or the other on this point." *See*, footnote No. 12, p. 81, *supra*. The fact of the matter is that the Master's construction of the compact would obliterate the economy of the Pecos River Basin in southeastern New Mexico. By ignoring the water salvage provisions of the compact, the Master's decision could slice in half the 125,000 acres of ground water irrigation in existence in

New Mexico in 1947, depending upon the way in which the Court would order such a decree effectuated.

To accept the Master's decision, the Court must believe that the New Mexico legislature agreed in 1949, when it ratified the Pecos River Compact, to the protection of only the 100,000 acres of ground water irrigation existing in 1939 instead of the approximately 125,000 acres existing in 1947. The New Mexico legislature has never been so cavalier. Such an apportionment of the waters of the Pecos River could never have happened, in equity or in reality.

New Mexico therefore requests that the Court overrule the Special Master and remand the case with instructions to proceed with trial with the understanding that: 1) the 1947 condition is that situation in the Pecos River Basin which produced in New Mexico the man made depletions resulting from the stage of development existing in 1947 even though the effects of those depletions had not yet been fully reflected in the flow of the river, and 2) the development that occurred during the year 1947 is part of that condition.

Respectfully submitted,

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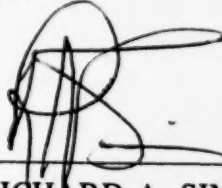
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CERTIFICATE OF SERVICE

Pursuant to Rules 42(5) and 33 of the Supreme Court Rules, I certify that three copies of the foregoing objections and brief in support thereof were served upon counsel of record on November 29, 1979.

A handwritten signature in black ink, appearing to be 'R. A. Simms', written over a horizontal line.

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